



No. 1076. (No. 32. Vol. XXI.)

Registered at the General Post Office as a Newspaper,

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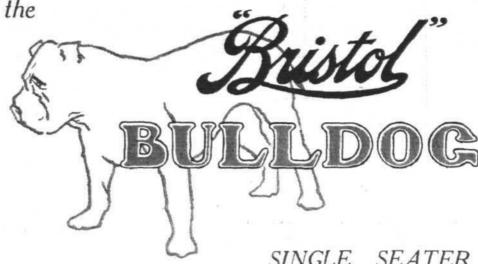
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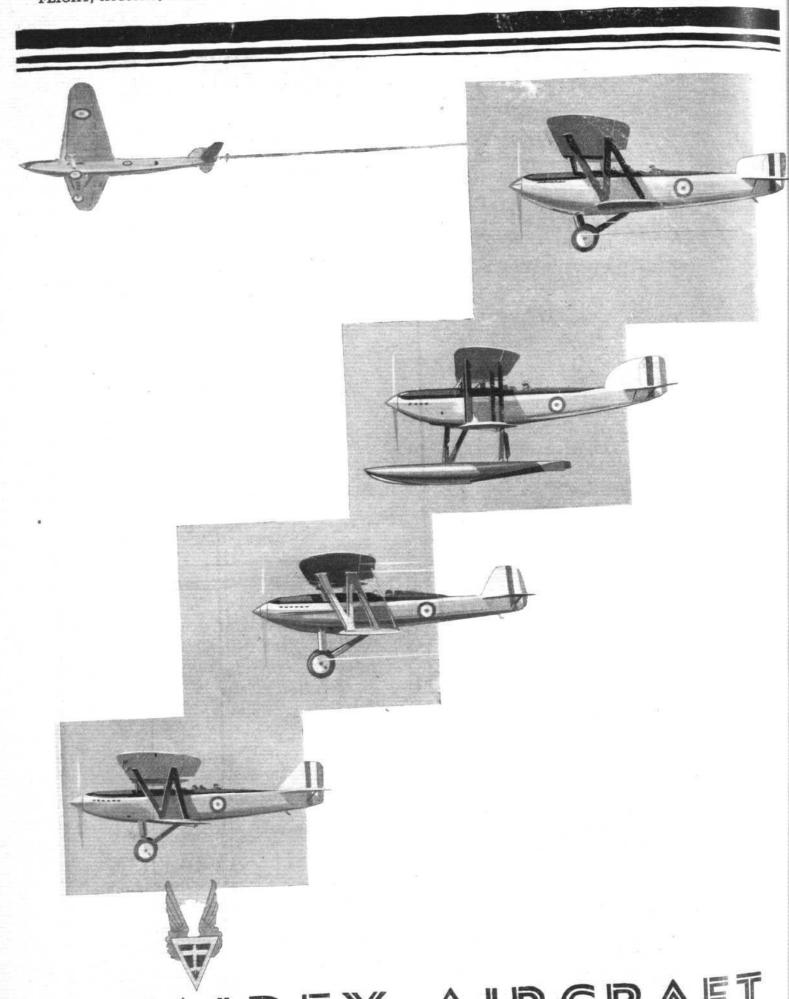
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OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM

No. 1076. (No. 32. Vol. XXI.)

August 8, 1929

Weekly, Price 6d. Post free, 7d.

Editorial Offices: 36, GREAT QUEEN STREET, KINGSWAY, W.C.2.

Welephone: Holborn 3211. Telegrams: Truditur, Westcent, London.

Annual Subscription Rates, Post Free.

United Kingdom .. 30s. 4d. Abroad 33s. 0d.

* Foreign subscriptions must be remitted in British currency.

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DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1929.

Aug. 1-14 French Light Plane Meeting, Orly.

Aug. 10 Air Pageant, Wythenshaw, Cheshire.

Aug. 15 International Balloon Race, Poland.

Sept. 6-7 Schneider Trophy Race, Solent.

Sept 10-20 Aero Club de France Meeting, Le Baule.

Oct. 1 Gordon-Bennett Balloon Race, St. Louis, U.S.A.

Oct. 31 Guggenheim Safe-Aircraft Competition Closes.

EDITORIAL COMMENT



EPRESENTATIVES of FLIGHT have this summer visited both the Oxford and Cambridge University Air Squadrons during their annual attachment at R.A.F. stations. Cambridge always goes to Old Sarum and Oxford to Manston. Possibly the Air Ministry Authorities reflected that "East is

East, and West is West, and never the twain will meet," and, having no desire for a Rugby football scrum between dark blue and light blue Avros, they so ordered matters. It is only after seeing both squadrons at work that one can

The University Squadrons squadrons at work that one can formulate a real opinion on this extraordinarily unique and extraordinarily excellent result of Air Ministry

initiative. If an American had seen Pallas Athene spring full-armed from the brain of Zeus, he would doubtless have called it a brain wave. A similar sort of Air Ministry brain wave caused the birth of these two University air squadrons. They are not under the Director of Civil Aviation and likewise they add nothing to the armed strength of the Royal Air Force. On the face of it they are an utterly illogical, and therefore a typically British, way of spending the taxpayers' money. They do not, however, absorb a very great deal of that money, and Mr. Snowden should not be able to make out a very strong case against Lord Thomson on the strength of them. It is the way of Britons that the most illogical things which they do are often among the most excellent. The Oxford and Cambridge squadrons could not be mobilised for war by Royal Proclamation. Their members have undertaken absolutely no obligations to fight. Yet they are taught to fly by officers of the Royal Air Force, and are asked to pay no more than 20s. a head per annum. What, it may be asked, does the country gain?

The answer is not really difficult to find, once one has visited the squadrons. In the first place, it is now generally recognised, even by the Treasury, that to spread air-mindedness is an object worthy of a considerable expenditure of effort and a moderate expenditure of money. It follows that if the country

is going to spend anything at all on this object, it would be sheer purblind folly to pass by the splendid flying material to be found among the undergraduates of Oxford and Cambridge. Even thoughtful Labour leaders will admit that the public school class is a valuable section of the community. When the boys of that class have reached the flying age, they mostly There are, however, disperse into the business of life. a few centres where they may be found congregated, chief among them being Sandhurst, Woolwich, Cranwell, Oxford, and Cambridge. Obviously the first three are not suitable objects for air propaganda; so there remain the two ancient resident Universities. The cause of air-mindedness would be a heavy loser if their undergraduates were allowed to remain untouched by the movement.

In the second place the defence of the country does gain a not inconsiderable number of officers as a result of the formation of these squadrons. This year nine members of the Cambridge squadron have applied for regular commissions in the Royal Air Force, in addition to others who have joined in previous years, and a large proportion of the members have at different times held commissions in the Reserve of R.A.F. Officers. Oxford has sent up three men for regular commissions, and, in addition, 43 Oxford men have been granted Reserve commissions. Of these, 17 were men who could not get accepted as members of the squadron. There are always four applications for every vacancy in the 75 places, and so many very good men cannot get These 17 were doubtless very good men, and it was through the squadron that the country obtained their services.

We admit that we should prefer to see more Oxford men apply for regular commissions. It is a loss to the Royal Air Force that it has not got a stronger Oxford element. Apparently there are not enough Oxford men of suitable rank in the R.A..F. even to staff the Oxford squadron with instructors who are all Oxford men. That ought to be remedied. At the same time, we believe that the Air Ministry holds by the first principle laid down as an object of a University squadron :- "To instil a knowledge of the air into an important section of the rising generation," and is not disappointed if one squadron does not act as a very prolific recruiting centre for the regular service. The acquisition of 43 Reserve officers from Oxford is, moreover, distinctly gratifying.

To some extent the reluctance of Oxford men to apply for regular commissions seems attributable to the energy with which the attractions of short service commissions have on occasions been urged, notably by the Chief of the Air Staff himself. The impression, it appears, has got about at Oxford that short service commissions are the only sort of regular commissions open to University candidates. Once tutors and heads of colleges have got an idea of that sort into their

Anglo-French Air Conference

FAR-REACHING results are expected to accrue from a conference held at the Air Ministry on August 7, between Lord Thomson, the Air Minister, and M. Laurent Eynac, the French Air Minister, to discuss civil aviation and questions of common interest, particularly in relation to the situation in Africa, the Far East, and South America.

Lord Thomson was accompanied at the conference by Mr. F. Montague, Under-Secretary for Air, Sir Sefton Brancker, Director of Civil Aviation, and other officials, and M. Eynac by M. Cameron, head of the French Civil Aviation Department.

heads, it is not an easy matter to dislodge it. To no class of man is a short service commission less likely to appeal than to a University man. Compared with boys who go straight from school into business, he has already spent three or four years before settling down to his life's work. He is not very likely to want to postpone that settling down for another five years. The permanent regular commission is a very different proposition. and once the University in general thoroughly grasps the fact that a degree makes such a commission a possibility, just as much as does a course at Cranwell. the position will probably change.

Comparisons are notoriously odious, but when one has to deal with Oxford and Cambridge it is almost impossible to avoid them. The Universities themselves are constantly inviting comparison at Putney, Twickenham, Lords, and elsewhere. When the men have gone down and started work in the world beyond the regime of the Proctors, the similarities become far more striking than the differences. But when Oxford and Cambridge undergraduates pursue the same ploy, they want, not only to do it well, but to do it better than their rivals do it

Cambridge, all honour to her, was the first to show a whole-hearted interest in aeronautics, and for this the world-famous work of Prof. Melvill Jones has doubtless been partially responsible. The Cambridge Air Squadron seemed to get into shape and become a living organism more quickly than did the Oxford Squadron. And perhaps it counts for something that Cambridge won the only air race yet held between the two Universities. The Cambridge squadron, under the inspiring leadership of Wing Commander Vernon Brown, has gone on from strength to strength and has made good both in Cambridge and at Old Sarum. Wing Commander Garrod, on the other hand, seems at the outset to have met with some opposition from the authorities at Oxford. That University, perhaps, felt it incumbent on itself to live up to its reputation as a home of lost causes, and opposition to aeronautics is now certainly a lost cause. The opposition of the authorities did not last for very Permission for qualified pilots to fly solo during term time seems actually to have been granted with less opposition at Oxford than at Cambridge. In both Universities the air squadron is now accepted as a regular feature of University life. It goes without saying that the undergraduates of both are equally Only experienced inspecting officers enthusiastic. could say which squadron is actually the better flying unit; and merit of that sort is bound to fluctuate from year to year as does success in ordinary forms of sport. Visits to both squadrons have revealed no points in which one or the other was noticeably lacking. The excellence of the work in both will surely bear fruit as the trained pilots, year after year, pass out into the world and spread the gospel of airmindedness.

The French party arrived in London on August 6. The 'plane in which they set out from Le Bourget, for Croydon, was forced to decord by the force of the control of the cont was forced to descend by bad weather at Berck. completed the journey by boat and train.

An official dinner to M. Eynac and M. Cameron was given at the Ritz Hotel. It was attended by the Prime Minister, Lord Thomson, Sir Sefton Brancker, Sir Walter Nicholson (Permanent Secretary to the Air Ministry), Air Commodore C. L. Newell (Deputy-Chief of the Air Staff), Mr. P. J. Oldfield (Air Ministry), and M. Fleuriau (the French Ambassador). If the weather permitted, Lord Thomson proposed to proceed to France by air with M. Eynac later.

INTERNATIONAL LIGHT PLANE TOUR OF EUROPE

the 82 entries for the First Challenge International d'Avions de Tourisme, which commenced at Orly, France, on August 3, 55 had arrived by the zero hour of 12 noon and had therefore qualified to start in the com-

Sponsored by the Aero Clubs of France, Germany, Italy, Roumania, Switzerland and Czecho-Slovakia, and held under the auspices of the Federation Aeronautique Internationale, this contest promises to be the most important event of its kind held up to the present time in Europe. participating in this reliability tour had to be entered through one of the six aero clubs mentioned above. The contestant thus entered represents the club through which his entry has been received, even if he is of another nationality and not a member of that particular club. The Aero Club of France has this year organised and is managing the tour, which is now intended to be an annual event.

The course consists of a circuit of about 6,000 km. (3,750 miles), divided into 25 sections (flights) traversing 12 countries of Central Europe. Particulars of the itinerary were given in Flight last week, together with a map showing

the distances between each section.

While intermediate stops are authorised the contesting planes are required to make a landing and be "checked" ateach one of the "control" cities. The winner of the tour will receive a prize consisting of an Objet d'art, of a value of 20,000 francs, presented by the Aero Club of France, also a cash prize of 100,000 francs. Additional prizes amounting to 30,000 francs will be presented by the six aero clubs sponsoring the tour. M. Laurent Eynac, the Air Minister, is also adding a cash appropriation of 200,000 francs to aid in the organisation and to award prizes in different classes. 40,000 francs of this sum will be divided amongst the planes showing the characteristics that make for the greatest safety in flying, viz., strength of construction, aerodynamic

qualities, protection against fire hazards, etc. In order to be eligible for these prizes planes must have effected the required circuit at least as far as Bucarest. The Renault Co. will present a 6-h.p. enclosed 4-place automobile to the winning plane, the motor of which shall have been made in France. The Gnome & Rhone Motor Co. will also present two prizes as follows: A 3-h.p. motocycle to the plane of the first class which makes the European circuit in the fastest time without any penalisations; A 2-h.p. motorcycle to the plane of the second class which makes the European circuit under the same conditions.

The Aero Clubs of Belgium and of Czecho-Slovakia will

give medals to the various winners.

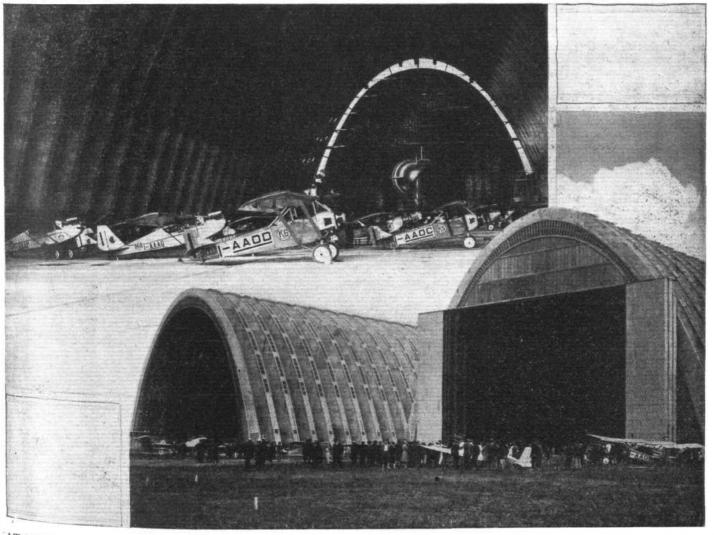
The entries are divided into two classes. They must be at least two-seater planes. Class I—Planes weighing not more than 400 kg. (880 lbs.) empty; Class II—Planes weighing not more than 280 kgs. (616 lbs.) empty.

An allowance of 10 per cent, is granted on each of the above weights. The minimum speed required in the flight will be 85 kms. per hour (53 miles) for planes of Class I; 70 kms. per hour (40 miles) for planes of Class II.

Grouped together in one of the enormous hangars con-

structed at Orly, to house dirigibles, these planes presented a most interesting spectacle. The general average was very good and represents a decided advance over preceding years. Most of the machines have been carefully finished, especially in respect to their "stream lining," and their speed in a number of cases is pretty high, when the power of their motors is considered.

Germany is represented by 34 machines (the largest entry by any one country) as follows:—Eight B.F.W.'s, two of which have Armstrong-Siddeley Genet engines of 80 h.p., four have Siemens-Halske 70-h.p. engines, two with 110-h.p. Siemens Halske, and one has a Cirrus III. These are low-wing monoplanes similar to the Klemm. Of Raab Katzenstein



AT ORLY: Our picture shows a scene inside the large airship hangar at Orly on the occasion of the International Light 'Plane Tour of Europe. Below is a view outside the hangar, showing some of the competing machines.

("Flight" Photos.)





AT ORLY: On the left, M. Laurent Eynac, Minister for Air, inspects the machines at Orly. Right—Capt. Percival, Capt. C. Turner, Miss Peyre, Mr. Montague (Under Secretary for Air) and Mrs. Turner, standing beside the latter's Avro "Avian," which was christened "Tramp." ("Flight" Photos.)

there are two, engined by a Cirrus and a Hermes respectively. The latter is a particularly clean machine and has a top speed of round about 130 m.p.h., but the landing speed is also high and would appear to be rather unsuitable for the bad ground over which the tour passes, should the necessity for a forced landing occur. It is being flown by "John Carberry." Six Klemms are entered, four of which have the nine-cylinder, 40-h.p. Salmson, and the remaining two a Cirrus and a 70-h.p. Siemens respectively. Junkers are represented by three Type A.50, two having Armstrong-Siddeley Genets and the remaining one a 80-h.p. Walter.

These are of the familiar corrugated-metal covered construction usual in Junkers machines, very neat and snappy jobs. Their landing speed, however, seems rather too high for the average private owner. An interesting German competitor is the Type D.18 (Genet engine) entered by Akadem. Flieger-gruppe. It is a pure cantilever biplane with a very pronounced forward stagger. This, of course, is only possible to this degree because of the cantilever wings. The arrangement, while looking very odd, affords the pilot an excellent view and keeps both pilot and passenger clear of all obstruction should the necessity to use parachutes arise. This



Two of the "Foreign Legion": Capt. H. S. Broad and Miss W. Spooner, the two Anglo-French Contestants.

("Flight" Photo.)

machine is also quite fast. One Arado-Warnemunde L.1 (Salmson 40 h.p.), one Albatros L.82b (Siemens 70 h.p.), and one Baumer B IV. 60-h.p. Wright-Gale engine completes the German team. The last-named is a "shoulder" monoplane and held the light plane speed record before it was broken by H. S. Broad on the Tiger Moth. The German absentees are two B.F.W.'s, one Raab Katzenstein Type 9, two Albatros L.82, one Soldenhoff L.E.6, one Guritzer Van Nes, one Phonix Meteor, one Focke Wulf S.24, and one Junkers A.50.

Czecho-Slovakia entered three Avia B.H. 11 "Antelopes" and one Aero-Tovarna Letadel, Aéro A.34, all of which are fitted with 85-h.p. Walter engines. One Avia "Antelope" failed to put in an appearance. The low-wing Avia is too well known to our readers to require a description, but an interesting feature regarding them is the metallic finish of the fuselage. One gathers it is done with a form of air-brush, the "paint" being applied by an oxy-acetylene flame impinging on a wire of whatever kind of metal is required to cover the work in hand. Quite nice for some of the nouveaux riches to have their machines gold-plated and the identification letters picked out in diamonds! The Aero A.34 is a normal biplane with folding wings and does not seem to be possessed of high performance.

Switzerland has two entries, both



Lady Bailey and Mr. Olney, who is Works Manager of "Cirrus" Aero Engines, Ltd., discuss engines at Orly. ("FLIGHT" Photo.)



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I have no objection whatever in your using this letter as an advertisement.

Yours faithfully,

HUGH GROSVENOR. (Signed)

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ENGINE STARTING: One of the Ro. 5 (85 h.p. Fiat) light 'planes in the engine starting test. ("Flight" Photo;)

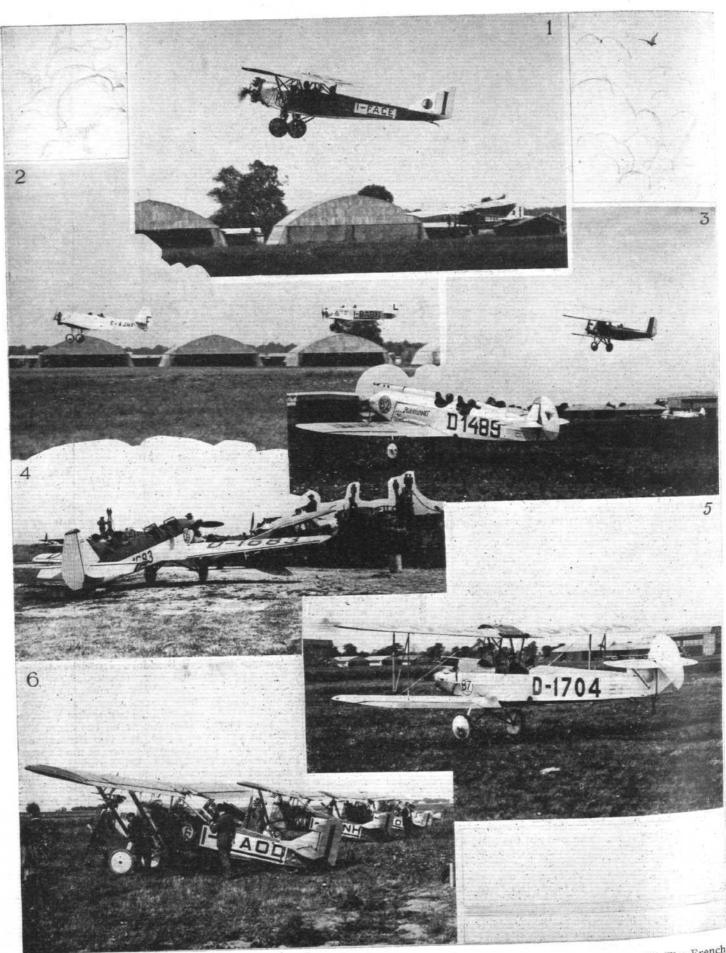
of which materialised. They are low-wing Klemms with Salmson 40-h.p. nine-cylinder radial engines.

France ranks next to Germany for number of entries, 28 in all standing to the credit of the Aero Club de France. It must be remembered, however, that eleven of these belong to nationals of other countries whose aero clubs did not find the necessary 20,000 francs to enter the competition under their own flag. So we find in the French entries one Brazilian, two Belgian, five English, one American, and two from Yugo-Of the purely French competitors, three Bourgois head the list, but none of these put in an appearance, neither did the two Albert T.T.2's. Rene Caudron entered two Caudron low-wing monoplanes which are peculiar for their extreme tapering chord. The wings are covered with plywood, and the landing gear of the wide tread split type with oleo pneumatic shock absorbers. One of these machines is equipped with a Renault 85-h.p. air-cooled motor and has a maximum speed of 175 km. per hour. The other plane is equipped with a 95-h.p. Salmson air-cooled motor, and a speed of about 180 km.-hr. is claimed for it. These planes have just been finished and are among the very few low-wing type monoplanes of French construction. A third Caudron, the high wing, 70-h.p. Anzani type, is in the name of the Club Aero-Universitaire. All three are taking part in the contest. Next there is the Guerchais-L. Henriot (Salmson 95 h.p.), a "conduite interior" monoplane whose pilot, Lemerre, found notoriety during last year's competition by always wearing a straw boater whilst piloting. Six Potez type 36, four of which are entered by M. H. Potez, and one each by M. Finat and Latham. The latter was a non-starter and of the others three have 95-h.p. Salmsons and the remaining the starter and of the others three have 95-h.p. Salmsons and the remaining the starter and the star ing two 80-h.p. Renault. These are also of the enclosed cabin monoplane type. The seats of the pilot and passenger are enclosed in a cabin constructed of plywood, and the wings can be folded back very easily and quickly. The method of can be folded back very easily and quickly. The method of construction is identical with that of the well-known observation-plane "Potez 25," of which there are about 1,500 in service in the construction of the well-known observation plane "Potez 25," of which there are about 1,500 in service in the construction of the well-known observation observation of the well-known observation observation of the well-known observation observation observation observation observation observation of the well-known observation observatio service in France and throughout Europe. This plane has a maximum speed of 95 miles, a landing speed of 57 m.p.h. and a ceiling of 3,600 m. Its total weight, equipped for flying is 1,430 lbs. An Autogiro C19 and C.A.S. complete the French "French" entries, so to speak, these also not materialising. The properties of phenotees among the foreign rialising. The percentage of absentees among the foreign legion was very large, there being no fewer than seven defaulters out of the eleven entered. Brazil and America failed to the seven entered. failed to be represented by their sole entrants, a Muniz M5

and John W. Edwards Gipsy Moth, respectively. One hesitates to think how to have apportioned the credit had Edwards, an American, entered through the French Aero Club and flying a D.H. Gipsy Moth, pulled off the first prize. An Autogiro C19, three Moths and one Simmonds Spartan comprised the English team, but of the four machines, only two of the Gipsy Moths (H. S. Broad and Miss W. Spooner) arrived at Orly by 12 noon. Lady Mary Bailey, who was also to have flown a Gipsy-Moth, arrived some 3 hrs. later on a Cirrus-Moth. It is believed she had a "spot of bother" at Croydon and damaged the undercarriage of the entered machine. But, splendid sportswoman as she is, although out of the competition, she intends to go round the course "hors concours." Capt. Broad's Gipsy-Moth is of the coupe type, slightly lower than the standard coupe, and is a particularly handsome machine, comparing very favourably with its foreign competitors. Of Yugoslav's two representatives, one each of L'Icarus-Mickl and Bloudel XV, neither turned up and so Yugoslav remained unrepresented. Two St. Hubert monoplanes, both having Walter 85-h.p. engines, represent Belgium and both were started.

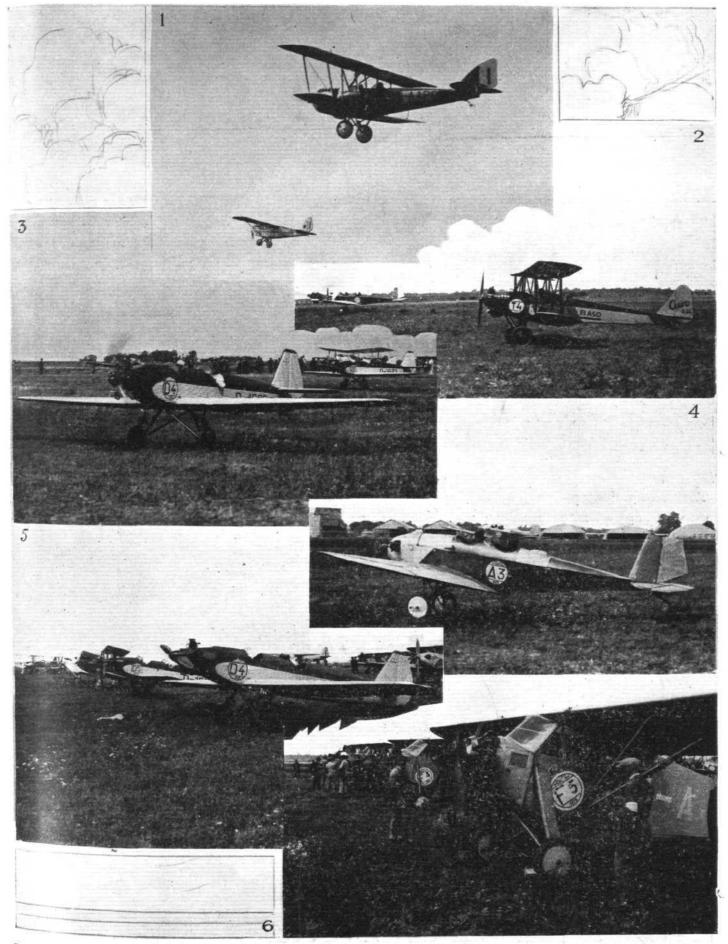
As is usual with matters aeronautic, Italy makes a brave show. No less than 14 machines appear on the entry list. Of these, 12 are in the competition, the two non-starters being Caproni Type 100. This is a pity as one of the Caproni pilots was to have been the famous De Bernardi, and it would have aroused considerable interest to see how this famous speed pilot would fare in a long drawn-out light plane competition tour. A "quartette" of Fiat A.S.1's share the distinction held otherwise only by the Gipsy Moths, both machines and engines being produced under the same roof, they being fitted with 85 h.p. Fiat A.50's. One of this type was on show at the recent Olympia Exhibition, and while undoubtedly a sound machine it has a somewhat oldfashioned appearance. Plain varnished fabric, transparent, so that wing construction shows through is 1914 practice and gives an air of out-of-dateness and fragility quite undeserved. Another four Italian 'planes of which there was a specimen at Olympia are the Romeo R.5's, all of which have Fiat radial engines of 85 h.p. These machines, it will be remembered, are high wing monoplanes with plywood fuselages. Cirrus engines supply the power plants of the three Type 15 Breda enclosed cabin machines, and since reliability plays a big part in the tour this may help to prove them serious com-petitors. One of these also was displayed at Olympia. They are of the high wing type provision being made for

AT ORLY



PETROL TEST AT THE ORLY MEETING: (1) Two of the Italian Romeo R 5's taking off. (2) The French Caudron 193 low-wing monoplane and the Aviv Antelope (Walter). (3) Raab Katzenstein 25 with Cirrus engine and a fellow countryman in the Akadem Type D 18 with Genet engine. (4) Filling up. (5) The Albatros L 82 with Gipsy engine. (6) Four Fiats A.S.I. (Fiat). ("FLIGHT" Photos.)

AT ORLY



CONTINUATION OF THE PETROL TEST AT ORLY: (1) Cant. 26, an Italian machine with Isotta Fraschini 80 h.p. engine, and a Breda monoplane (Cirrus). (2) The Genet-engined B.F.W. monoplane and the Aero 34 (Walter). (3) Two of the Junkers A. 50's fitted with Genet engines, and Capt. Broad's Gipsy-Moth. (4) Two B.F.W. monoplanes, and (5) German and English competitors ready to start—the Junkers A.50 (Genets) and two Gipsy-Moths. (6) The French Potez await the word "Go." ("FLIGHT" Photos.)

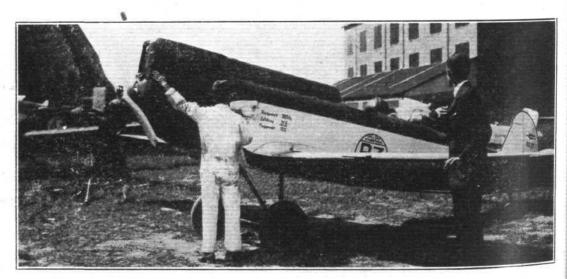
The Cantiere Nav.
Triestino Cant. 26 (80
h.p. Isotta Fraschini).
("FLIGHT" Photo.)

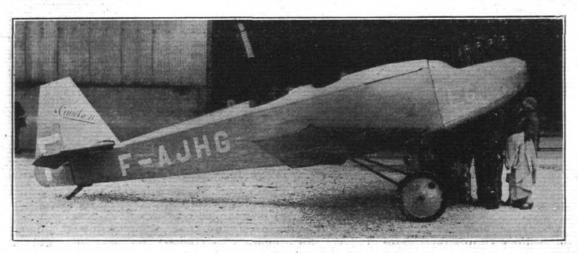




"John Carberry's"
Raab Kalzenstein, with
Cirrus "Hermes" engine. ("FLIGHT" Photo.)

The Akadem. Fliegergruppe type D.18 (Armstrong-Siddeley "Genet.") ("FLIGHT" Photo:)





The latest Caudron
type 193 low-wing
monoplane (85 h.p.
Renault). ("FLIGHT"

Photo.)



CROYDON TO CHINA 14,000 MILE FLIGHT IN AN AVIAN

On March 2nd of this year, Mr. Wenlin Chen left Croydon Aerodrome in an Avro Avian. On May 10th, he arrived at Amoy, China. Throughout this 14,000 mile flight across Europe and Asia no trouble was experienced, and Mr. Wenlin Chen expressed complete satisfaction with the machine. This Avro Avian is one of fourteen ordered by the Chinese Government for a school to be opened at Nanking.

AVRO AVIAN

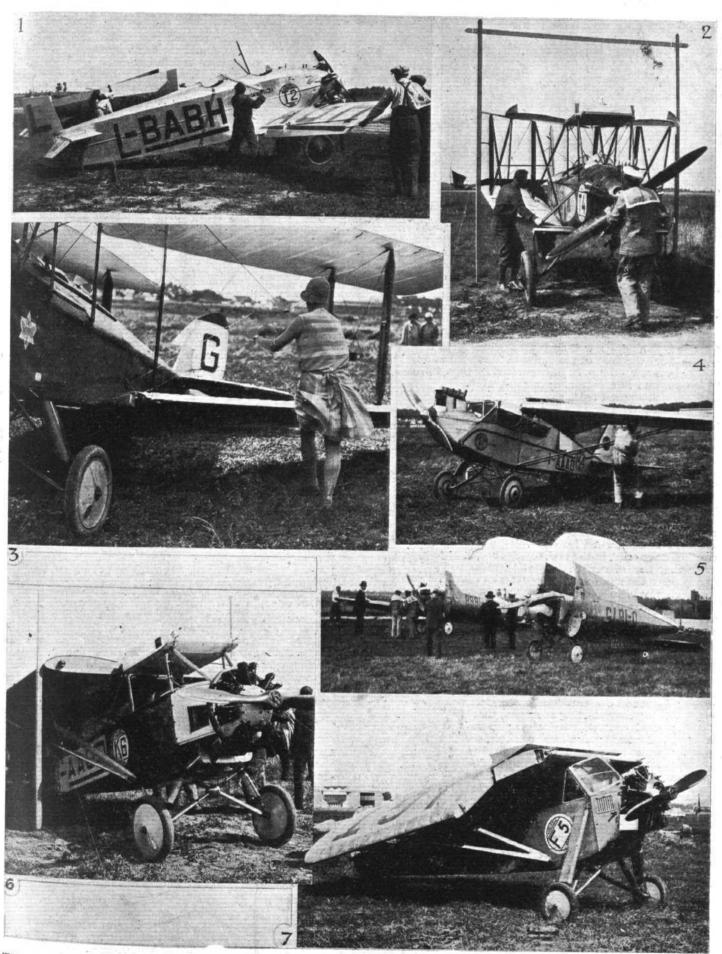
The safest, most dependable, easiest to handle light aeroplane. Used increasingly by flying clubs throughout the world.

A. V. ROE & CO., LTD.

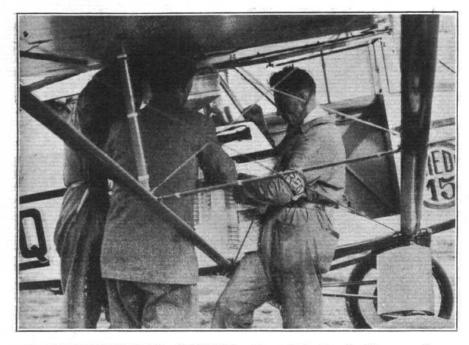
166 PICCADILLY, LONDON, W.I. Works: - NEWTON HEATH, MANCHESTER AND HAMBLE, SOUTHAMPTON



AT ORLY



THE FOLDING TEST AT ORLY: (1) Avia Antelope (Walter engine) with the German B.F.W. in the rear (2) Aero A34 (Walter)—another Czechoslovakian machine. (3) Miss Winifred Spooner's Gipsy Moth essaying the test with ease. (4) One of the Breda 15 monoplanes with Cirrus engine. (5) Two of the German B.F.W. monoplanes, some of which were fitted with Genet engines and others with Siemens and Halske engines. (6) A very tight fit for the Fiat A.S.I. (Fiat engine). (7) One of the French Potez 36 passing the test. ("Flight" Photos.)



MEASURING PETROL AT ORLY: One of the Breda 15 monoplanes after the test. ("FLIGHT" Photo.)

folding, each having a well-appointed cabin. The other competitor from the land of the sun and Mussolini is a Cant. 26 (Isotta Fraschini 80 h.p. engine) entered by the Cantiere Nav. Triestino, and is a normal open two-seater

biplane with a round fuselage.

Saturday afternoon saw the appearance of that wonderful atmosphere to be found only at aviation meetings. By this is not only at aviation meetings. meant the familiar smell of dope and petrol, but that produced by the finding of loop-holes in the regulations, the wonderful tales of the performances of the other competitors, the remaking of old friendships and of the "having one" for auld lang syne. It is a wonderful thing this, and many's the man whom aviation has not treated too kindly, who has quitted for something more remunerative only, in the end, to drift back, preferring the interest that aviation alone can give, to the more mundane successes of However, to our muttons once more. The first one and a half days-that is to say, Saturday from noon and Sunday-were devoted to the preparing of the machines and the minor parts of the competition, such as the examination of the machines to award the marks for practical qualities shown therein. Twenty-six points were possible of attainment in the following order: for sound construction and comfort, eight points; easy starting of engine, three points; dual control, two points; chutes, two points; fire extinguishers, six points; while the other five points were to be gained by facilities for folding or dismantling the wings to enable the machine to pass through a 3-m. gateway. Engine Engine starting caused no difficulty as the passenger was allowed to swing the propeller, but the folding held more interest. The Klemms and B.F.W.'s removed the wings and laid them alongside the fuselage, when of course, a gateway much smaller would have served their purpose. This is done very quickly, but has the disadvantage that it requires two persons. The Avia Antelopes are the same in this respect. The Potez are the same in this respect. The Potez 36 folds, but gains little thereby because of the deep chord of the planes. As is obvious from one of our photographs, the folding is attained by hinging the trailing edge of the centre section upwards from the rear The wings then swing, after unlocking the front spar, on the point of attachment of the struts to the fuselage and the rear spar, where a universal joint is fitted owing to the hinge centres being out of line.

The Fiats are similar except that plain hinges serve the purpose in this type. The Bredas, having parallel wire-braced wing struts, manage very neatly with a jury strut wing vertically from the front spar and the wing hinging on the rear spar. The Moths, of course, found the test very easy. The best times were as follows:—H 5 De Havilland, The best times were as follows:—H 5 De Havilland, 22 secs., Broad; H 6 De Havilland, 30 secs., Miss Spooner; F 3 Potez, 1 min. 2 secs., Roques; T 4 Aero A 34, 1 min. 8 secs., Novak; M 4 Breda, 1 min. 10 secs., Ferrarin; F 6 Potez, 1 min. 15 secs., Finat; F 5 Potez, 1 min. 20 secs., Weiss; M 2 Romeo R,5, 1 min. 30 secs., Gastaldo; B 9 Albatros L 82b, 1 min. 35 secs., Junck. In the midst of the general business several In the midst of the general business several officials were "circulating," stamping the parts of all the competing machines to check any replacement made during the tour. Some of the mechanics nearly died of heart failure to see a punch and hammer used on the fragile aluminium crank-cases. The stamp on Miss Spooner's fuselage was already showing signs of wear on Monday. It is hoped she will not be credited with having fitted a spare one.

Monday, 10 a.m., was the time appointed for the first flying portion of the contest. It was an out and home course

test. It was an out and home course of 150 kms. to be covered twice. Marks were obtainable for speed and petrol economy up to a maximum of 20. A very useful feature of the competition this, as it enables one to get



AT ORLY: Two of the Breda 15 monoplanes starting on their second lap in the consumption test. ("FLIGHT" Photo.)

After the Show |

Now you have had an opportunity of studying all the leading engines of the world, may we remind you that the Napier engine has demonstrated its reliability and efficiency in the following up-to-date performances.

THE FIRST NON-STOP FLIGHT FROM ENGLAND TO INDIA was accomplished by a Royal Air Force Fairey monoplane fitted with NAPIER engine—4,130 miles in 50 hours 38 minutes.

THE FIRST FORMATION FLIGHT FROM ENGLAND TO AUSTRALIA was achieved by four Royal Air Force Supermarine "Southampton" flying boats each fitted with two NAPIER engines—180,800 engine miles without mechanical trouble.

THE HIGHEST SPEED IN THE AIR was accomplished by Flight Lieut. D.D'Arcy Greig with a Supermarine seaplane with NAPIER engine—speed 319½ m.p.h.

THE HIGHEST SPEED ON LAND was set up by Major Sir Henry Segrave on his Irving-Napier special with NAPIER engine.

Captain Malcolm Campbell set up world's land speed records for 5 miles and 5 kilometres with his Napier engined car.

No other engine has such a record of achievement.

NAPIER

The finest aero engine in the World

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GLOSTER



INTERNATIONAL AERO EXHIBITION OLYMPIA, 1929.

"The Survey biplane is in complete skeleton form and is an absolutely interesting example of Gloster metal construction."—The Aeroplane.

"The companion machine to this was built for the Aircraft Operating Co., Ltd., and is already flying. Altogether it is quite one of the most interesting aircraft in the Show, and is a credit to its constructors in every way."—The Aeroplane.

"Altogether this is a very fine exhibit, thoroughly expressive of the best type of British aircraft construction and progress."—The Aeroplane.

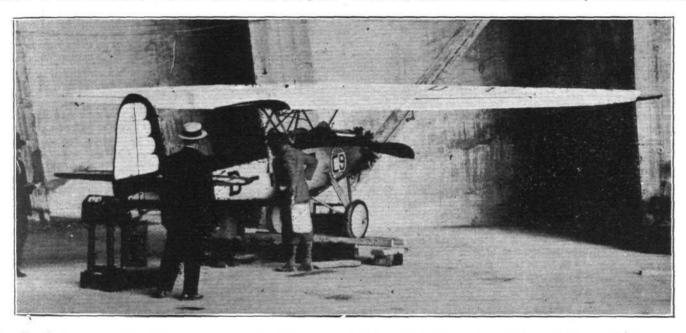
THE PIONEERS OF STEEL AIRCRAFT.

GLOSTER AIRCRAFT CO., LTD., SUNNINGEND WORKS, CHELTENHAM. at the economical cruising speed of the aircraft concerned but, of course, it must be remembered, landing speed must not he lost sight of. After much argument as to how 55 machines were to fly safely on an out and home course, during which several small Leagues of Nations and Federations of Pilots sprang up, it was finally decided to start the machines in groups of four, the fastest first, at intervals of 3 minutes. seemed to satisfy most, but even so quite a number of pilots hung fire at the dropping of the flag, willing to lose a little time rather than risk a collision. Owing to the time taken in measuring the petrol into the machine, the start did not occur until 3 p.m. Generally speaking, the piloting, with the exception of perhaps eight or so, was bad, some of the takes off being very "emotioning," and the turns at the end of the first lap poor. The best was undoubtedly Broad, who made a most perfect right turn. The final return and landing was hideous to behold and would have disgraced one of our week-end club meetings with only amateur pilots. The first thrill was supplied by one of the Romeo machines, which narrowly missed a motor car on the road and then made a cross-wind landing with the result that the wing was scraped many yards along the ground and only pure luck prevented the usual cartwheel. The next was much more A B.F.W. made a flat turn down wind, the pilot perform various stunts over the airport at a height of about 3,000 meters. He succeeded in doing two beautiful loops, when, in attempting a third, one of the wings of his monoplane broke in two, pulling out the four steel tubes from the fuselage with which it had been supported. The fuselage with the motor shot to the ground like a rocket and buried itself deeply in the ground. Held in the fuselage by the speed of the fall the unfortunate Hoffman was unable to disengage himself and so use his parachute. He was picked up dead, badly mangled. Hoffman was a native of Darmstadt, and graduated from the university of that city. He was also an engineer and designed the plane in which he met his death.

This finished all the preliminary tests prior to the 3,776 miles tour covering most of Europe—as seen in our map last week—which started on Wednesday. It will be interesting to see how many machines can complete such an arduous

course without any replacements.

Among the prominent visitors were Sir Sefton Brancker, Director British Commercial Aviation, who visited the Orly hangar last Saturday, Sir Sefton inspected all the planes and declared himself much impressed with the progress made in their development during the past year. He left on Sunday in his Coupe "Moth" to fly to Basle and Zurich. From there it is said his intentions were to fly to Friedrichshafen



Preliminaries: Weighing in the Arado-Warnemundel L.I. (70 Salmson) at Orly. ("Flight" Photo.)

in the middle shutting off his engine. As was to be expected, the machine dived straight into the ground, without, however, hurting the occupants. Whether the excitement of competition, or the necessary ability required for a landing from a right-hand turn is too much for the continental temperament, one does not know, but, after several landings taking up the whole of the aerodrome, which is exceptionally large, M. Finat treated the spectators to a display of how not to land. He made his right-hand turn losing height all the time, and to everyone's amazement made a mixed down windcross wind landing. He turned up on his nose causing little or no damage to his machine. He deserved worse. Generally speaking, with the exception of the incident mentioned, the Italians were very good. At the cost of perhaps being thought biased, full marks must go to Broad and Miss Spooner, who handled their Moths in a manner outstandingly excellent. Carberry's Raab-Katzenstein proved to have the fastest turn of speed, having averaged about 110 m.p.h.

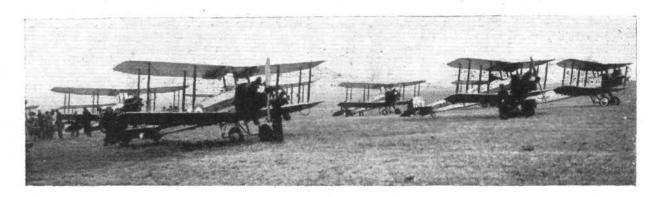
Two German pilots, Dr. Eggers, who is also an engineer, and Hoffman, took off in the monoplane Arado-Warnemunde L.I, equipped with a Salmson 40-h.p. motor, to make this fuel consumption test. After flying about 20 kms, they were obliged to land in a field bordered with trees, owing to a clogged fuel feed pipe. After cleaning out same they found that it would be difficult for the plane to take off in the given space with two people aboard. Dr. Eggers therefore returned to Orly by the road and Hoffman continued the course alone. On returning to the Orly Aerodrome Hoffman began to

to inspect the new Dornier "Dox" 12 motor plane and to take a flight in same.

A very pretty and interesting little international ceremony took place in front of the big hangar at Orly last Saturday, when Mrs. Turner, the wife of Captain Cyril Turner of the British Reserve Air Force, christened her new Avro Avian Plane, naming it the "Tramp." Among those present were the Hon. Montague, British Under Secretary of State for Air, Sir Sefton Brancker, M. Laurent Eynac, French Air Minister, and Captain Proteus of the French Navy, and the Commandant of the Orly Air Base. Sir Sefton Brancker made a very appropriate little speech, in which he congratulated Mrs. Turner, and after wishing her the best of luck he called attention to the fact that while she was French by birth she had married an Englishman and that she had a British certificate for her plane. M. Laurent Eynac also congratulated Mrs. Turner, and called attention to the close and cordial relations existing between the countries. Mrs. Turner in replying declared that she was very proud of having two Air Ministers present at the baptism of her plane together with Sir Sefton Brancker and that while her plane was British it had always been her wish to have it baptised on French soil. She further declared that she trusted that the Aviation Alliance between France and England would be always as cordial and happy as her family one.

Final official times are so far not available, and until the close of the tour we must perforce wait for the full results and awards.

OXFORD UNIVERSITY AIR SQUADRON



BY MAJOR F. A. DE V. ROBERTSON, V.D., M.A. (Oxon.)

BLUES, Dons (one must be careful to give such personages their due precedence), Bachelors of Arts in statu pupillari, men who have gone down and are now taking their share in the world's work, Rhodes scholars, and last (and most important of all), common or garden undergraduates—of such is composed the Oxford University Air Squadron, now in camp at Manston aerodrome. What must the shade of Mr. Verdant Green think of such a collection—and of its occupation? Flying is a great levelling influence, and a Blue with a heavy hand on the joy-stick would be of less account at Manston than a scholar who could do a neat slow roll. Not that it is suggested that the Blues are heavy-handed. The boxing Half-Blues may have tremendous punches, but they must needs be quick with their hands. The rowing Blues have been taught not to sky the feather, and even a Rugby forward nowadays is expected to take and give passes with accuracy.

give passes with accuracy.

The very fine personnel of the squadron as one saw the members on the ground; the very fine bit of formation flying which one saw overhead—these are the two chief impressions which one brings away from a visit to Manston. It was not surprising to learn that the squadron actually does number among its members two rowing Blues, one Rugby football blue, and two boxing Half-Blues, in addition to any number of men who have rowed or played for their respective colleges. It was rather more surprising to learn that one of the rowing Blues is now a Fellow of Magdalen, and another member, lately a Rhodes scholar from South Africa, is a Fellow of B.N.C. There was a time when the last thing one would expect of a Don was to be a fly-about.

Yet, though the writer was a private in the O.V. Volunteers when they lined the Wards of Windsor for the funeral of Queen Victoria, he cannot find it in his heart to ejaculate "Ehen fugaces!" Even then men speculated on the chance of discovering the art of flight, and, though we knew it not, the Wright brothers even then were on the high road to success. It is well that the Fellows should accompany the Bachelors and undergraduates into the air. It implies a better type of Don than one knew of yore.

The high quality of the squadron's personnel and the excellence of the flying are only natural when one remembers that the number of members is confined to 75, and for every vacancy there are always three or four applications. The period of annual training at Manston this year is from July 1 to August 10; 25 members go into camp at a time and remain for a fortnight. Of the first two batches 44 were flying solo, and of the third batch it is expected that 20 will have qualified by the end of the attachment. Sixty-six qualified pilots out of a possible 75 is a useful contribution to the air resources of the country. The remaining nine may well be freshmen who will qualify later, though of late it has been no uncommon thing for a man to qualify for solo flying in his first year with the squadron. During term time flying takes place at Upper Heyford aerodrome, and qualified pilots are allowed to fly solo there.

During the annual training the equipment of the squadron is eight Lynny Avres and three Printed Fight are with an additional printer of the squadron is sight Lynny Avres and three Printed Fight are with an additional printer of the squadron is sight Lynny Avres and three Printer of the squadron with an additional printer of the squadron and printer of the squadron and three Printer of the squadron is sight Lynny Avres and three Printer of the squadron with an additional printer of the squadron and three printers of the squadron and three squadron and three printers of the squadron and three printers of the squadron and three squad

During the annual training the equipment of the squadron is eight Lynx-Avros, and three Bristol Fighters, with an additional two of each type held in reserve. Flying kit is supplied to the members on free loan, for the only financial liability of a member is an inclusive annual subscription of £1. The



INSTRUCTORS AND MEMBERS OF THE OXFORD UNIVERSITY SQUADRON AT MANSTON (left to right): Flight-Lieut, J. J. Williamson, A.F.C., Flight-Sergt, Kelly, Sergt, Denison, Mr. W. Clarke, Mr. J. K. Watson, Mr. P. Johnson, Wing-Com. A. G. R. Garrod, M.C., D.F.C. (Officer Commanding), Mr. R. Hobbins, Mr. J. W. G. Birkbeck, Mr. J. D. Braithwaite, Mr. S. H. R. Clarke, Mr. J. C. Hart, Mr. C. H. Wheat, Dr. I. H. Evans, Mr. E. A. M. Norie, Mr. J. C. Hosken, Mr. J. M. Freeman, Sergt, Harper, Sergt, Acres, Mr. J. C. E. Luand, and Mr. C. H. Carter ("Flight" Photo.)



The Great Gipsy Moth Reliability Test

Sealed Gipsy Engine

has now flown
502 HOURS
on
PRATTS

The distance covered at 27/7/29 was 42,695 miles. Petrol consumption averaged 19½ m.p.g.

Speed and Security Dependupon Purity



MeC. 178



Seaworthiness Test of "Rohrbach-Romar."

Seaworthiness!

Seaworthiness will always be one of the most difficult conditions to be met by flying-boat constructors.

For quite a couple of years the Aircraft Industry has been unable to guarantee their customers any reasonable figures of seaworthiness for flying-boats.

The Rohrbach Metall-Flugzeugbau G.m.b.H. was the first firm, ever since the construction of flying-boats was started by the industry all over the world, to guarantee, for the three "Rohrbach-Romar" ships then under construction, seaworthiness in a sea up to force 5 (Beaufort).

On December 11th and 13th, 1928, the "Rohrbach-Romar" underwent her seaworthiness trials, under supervision and to the entire satisfaction of the "Deutsche Versuchsanstalt für Luftfahrt" and "Deutsche Lufthansa A.G.," who satisfied themselves of the excellent manœuvrability of the ship in rough waves.



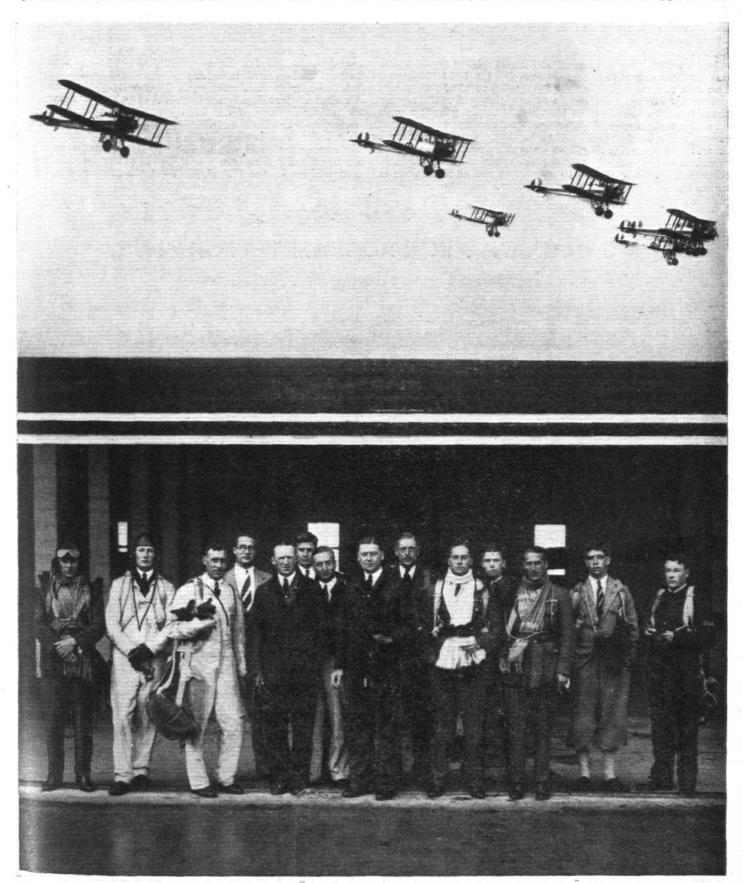
ROHRBACH METALL-FLUGZEUGBAU G.m.b.H., BERLIN, N.65.



staff at Manston consists of the Chief Instructor, who is practically the C.O., Wing-Commander A. G. R. Garrod, M.C., D.F.C., M.A. (Oxon.), and the Instructor, who acts as Adjutant, Flight-Lieut. J. J. Williamson, A.F.C. There are seven flying instructors for this period of training, Flight-Lieuts. F. J. W. Mellersh, A.F.C., and E. A. Sullock, A.F.C., and Flying Officers L. C. Barling, F. T. Stacey, G. A. V. Tyson, V. B. S. Jackson, and W. E. P. Johnson. The squadron has no uniform except an armlet worn on the

overalls, but the usual dress in camp is the squadron blazer and tie and grey flannel trousers. Rooms are provided in the station buildings, and the staff and members share the station mess with the officers of No. 9 B.S. and No. 2 A.-C.S. On August 3 No. 605 (County of Warwick), B. S., Auxiliary Air Force, went into camp at Manston, and will be there for a week with the Oxford squadron week with the Oxford squadron.
Wing-Commander Garrod told me that Manston was a

most satisfactory station for climate, health, and opportunities



LYNX-AVROS FLOWN BY THE OXFORD UNIVERSITY SQUADRON GROUP BELOW DIVING IN FORMATION OVER MANSTON. The Group (left to right) Flying Officer W. E. P. Johnson, Flying Officer V. B. S. Jackson, Flight-Lieut. E. A. Sullock, A.F.C., Mr. R. F. Woolmer, Flight-Lieut. J. J. Williamson, A.F.C., Mr. J. C. Hart, Mr. A. F. F. Lawton, Flight-Lieut. F. J. W. Mellersh, A.F.C., Flying-Officer F. T. Stacey, Flying Officer G. A. V. Tyson, Mr. G. C. Gant, Flying Officer L. C. Banting, Mr. S. H. R. Clarke and Mr. R. D. Stewart ("FLIGHT" Photos.)

for recreation. There are tennis courts, a swimming bath, etc., on the station, and sea bathing can be got very easily. It was also good for novices to practise cross-country flying, as they could not easily lose their way with sea on three sides of them. But he found, what the regular squadrons also find, that what is an advantage for novices is a drawback for more experienced pilots. One cannot practise them thoroughly in navigation. There is only one direction in which to set out. There are two R.A.F. aerodromes within easy reach, Eastchurch and Hawkinge, and they sometimes fly over to them. But as a rule the machines are too busily engaged at home to permit of many long cross-country flights.

During last year's training 910 hours' flying was carried out, but this year it is expected to reach a total of 1,100 hours. The first two courses this year amassed a total of 785 hours.

The Air Ministry certificate of proficiency for University squadrons was instituted in March, 1928. To gain it a man must fly a minimum of three hours' solo and pass a written examination in airmanship, engines, rigging, and air pilotage, in addition to attending two annual camps. Already 48 members of the Oxford squadron have gained this certificate. Now, a member who fails to gain it in the allotted time is called upon to resign from the squadron.

Although University candidates for R.A.F. Commissions have often done more hours' flying than a cadet who has passed through Cranwell, the latter are posted direct to squadrons, while the former are sent first to flying training schools. So far three members of the Oxford squadron have been granted regular commissions, and two of these have finished their courses at the F. T. schools. One was awarded a "Special Distinction," and the other a "Distinguished Pass." It may, however, be held that a man does better service to his country by joining a Reserve of Officers than by joining the regular forces. In the latter case he gets paid for his services, and the R.A.F. pays well. The Reserve Officer costs the country practically nothing, while he adds a very useful quota to its defence. By the end of September 26 past and present members of the Oxford Squadron will have completed their training as Reserve Officers of the Royal But that is not the total of Oxford's contribution to the air defence of the country. While the squadron is obliged to reject three out of every four applicants for membership, there must needs be much excellent pilot material in the University which is not in the squadron. Such men seek other ways of getting into the air, and 17 of them have obtained commissions in the R.A.F.O. That shows that airmindedness is not conspicuously absent from Oxford.



CANADIAN AIR PROGRAMME FOR 1929

Increasing Forestry Patrols and Air Survey

ACH year sees a greater extent of Canada coming under aerial observation for the different services of the Federal Government. The 1929 programme of the Department of National Defence, Directorate Civil Government Air Service, for government departments includessubject to such alterations as subsequent circumstances may necessitate-the following work :-

Department of the Interior

Forest Service.—The former area of 3,500,000 acres patrolled in Alberta is increased to 25,500,000 acres. The added area is in the Peace River district where two light 'planes will operate out from Grande Prairie on detection work only.

In Saskatchewan the work has been reorganised and the 'planes will cover 21,250,000 acres in the interests of forest

protection, both detection and suppression.

In Manitoba over 44,500,000 acres will be patrolled, for both detection and suppression purposes. Here also there is an increase in the area patrolled of about 7,000,000 acres to take care of territory subject to additional hazard through recent mining development.

The photographic work in connection with the survey of the Nelson river watershed is to be completed.

Topographical Survey.—Oblique aerial photography in connection with the study and mapping of the English River, Ignace, and Miminiska Lake areas in Ontario; Manitou, Cross Lake and Granville Lake areas in Manitoba; Reindeer Lake, Foster Lake, Mudjatik River, Fond du Lac and Black Lake areas in Saskatchewan.

Vertical aerial photography in connection with the study and mapping of the Lunenburg and Lake Rossignol areas in Nova Scotia, the Moncton and Newcastle areas in New Brunswick, the Taschereau Senneterre, Parent, Doucet, Bell River and Maniwaki areas in Quebec, the Lake Nipissing, Algonquin Park, and Rideau Lakes areas in Ontario, Kississing Lake area in Manitoba, Prince Albert area in Saskatchewan, Shuswap Lake area and Parsnip River valley north of Prince George, in British Columbia.

National Parks of Canada.—Oblique aerial illustrative views of sites of historic interest when other operations permit. If 'planes are available the photography of areas between the Big Bend of the Columbia river in British Columbia and the Canadian National railway. Continuation of the practice of co-operating with the Forestry Branch in the patrol of

the Waterton Lakes park from High River base.

Natural Resources Intelligence Service.—The taking of oblique scenic photographs illustrating features of all kindssettlements, power plants and sites, lumber and mineral developments, industrial plants, etc.—relating to the development of the natural resources of Canada.

Dominion Water Power and Reclamation Service.—Vertical and oblique photography in connection with power projects in New Brunswick, Quebec, Ontario, Manitoba, and British Columbia, including vertical photography of areas adjacent

to the Winnipeg, Nelson, and Churchill rivers, and Rottenstone lake.

Geodetic Survey.-Reconnaissance flights along the Canadian National railway from Senneterre to Barriere on lake Kakabonga, from Clave to near La Tuque, and from the vicinity of Folyet to Nakina; on the Canadian Pacific Railway from Sudbury to Sault Ste. Marie.

North West Territories and Yukon Branch.—Provided planes are available, aerial photography over a number of different areas in the Northwest Territories.

Department of Mines .- In co-operation with the Topographical Survey, Department of the Interior, vertical aerial photography to complete work started last year in areas in Cape Breton island, Nova Scotia; in New Brunswick; and in Manitoba, together with a small operation in the Rottenstone Lake area.

Department of Public Works.—To assist in dredging and other operations in Kootenay district of British Columbia. Vertical photographs have already been taken in the vicinity of Arrow lakes and Kootenay Lake.

An area also in the vicinity of Prescott is being photographed in connection with port development. It may be mentioned that vertical aerial photographs reveal underwater features which assist in laying out such projects.

Department of Agriculture.- Experimental dusting for the revention of wheat rust in the Prairie Provinces, and for the control of the spruce budworm in the Sudbury district. In co-operation with the Ontario Government Air Service, the control of hemlock looper in Muskoka district.

Provincial Services .- In addition to the work of the Royal Canadian Air Force, extensive programmes are being carried out by provincial governments and private interests. The province of Ontario operates its own Forestry flying service and during the period of fire hazard detection and suppression patrols are carried on throughout northern Ontario Forest type sketching is also carried out on a large scale, as well as exploration in the district of Patricia. This work each year, on account of mining and other developments, is being extended farther and farther north.

In Quebec and British Columbia the work is undertaken by commercial companies, under contract for the respective provincial governments. Much transportation of survey parties on the north shore of the gulf of St. Lawrence is done by aircraft. A large part of Gaspe has now been photographed. Air patrols for forest fire protection will be continued in British Columbia.

Commercial Services

At the present time there are 44 commercial operating companies in Canada. Their activities extend into all parts of the Dominion and include forest fire patrols, timber cruising, air photography, passenger, express and mail transportation, instruction, and other related services.



ARMSTRONG SIDDELEY ENGINES

Hendon and Olympia

IRST the R.A.F. Display and then the Aero Exhibition disclosed the dominating position of Armstrong Siddeley aero engines. At these important events Armstrong Siddeley aero engines easily out-

numbered other types, being widely fitted in fighting, training, civil, naval and military aircraft of all kinds.

The remarkable popularity of the Armstrong Siddeley engine is due to the excellent service it gives under the severest conditions and to the complete range of standardised engines offered.

In the Armstrong Siddeley range from 80 h.p. to 800 h.p. there is an engine of proved quality, endurance and performance to meet your particular requirements.

Full details in four languages sent by return of post.



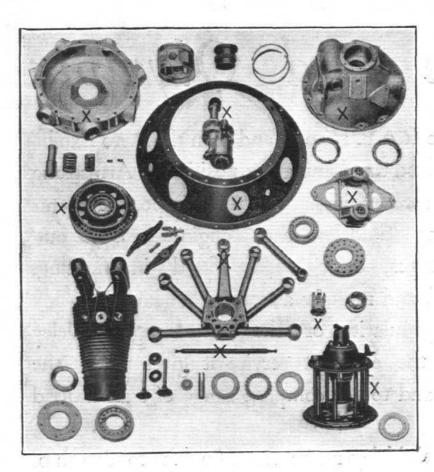
ARMSTRONG SIDDELEY MOTORS LIMITED

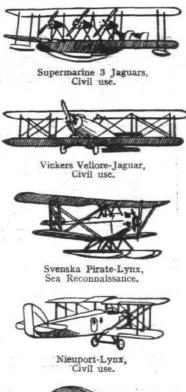
Head Office and Works: Coventry.

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ARMSTRONG SIDDELEY ENGINES







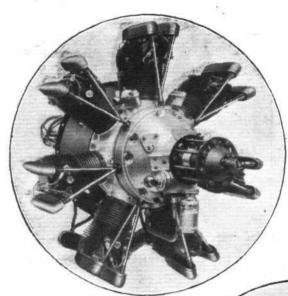
Civil use.

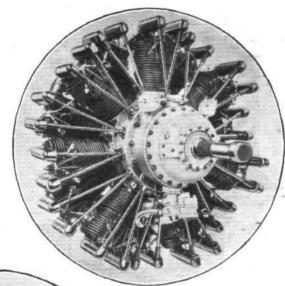
The Value of Standardisation

Y varying the number of cylinders the Armstrong Siddeley Jaguar, Lynx, and Mongoose engines cover a wide field of applications with a high degree of standardisation and interchangeability of parts. The parts marked with a cross are interchangeable on the Jaguar and Lynx, the other parts being interchangeable on all three engines. The varied uses of these engines are shown by the illustrations of aircraft in which they are fitted.



ARMSTRONG SIDDELEY ENGINES





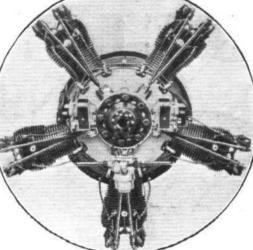
Armstrong Siddeley 7-cylinder 215-230 Lynx.



Hawker Tomtit-Mongoose, Land Training.



Fokker Mongoos Land Training.



Armstrong Siddeley 5-cylinder 150-165 Mongoose.



Siskin Jaguar, Land Fighter.





Avro Mongoose, Land Training.

Blackburn Lincock-Lynx, Land Fighter.



Argosy 3 Jaguars, Civil use,



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Atlas Jaguar, Sea Reconnaissance.

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KING'S CUP

The

ARMSTRONG SIDDELEY JAGUAR ENGINE

in the

GLOSTER GREBE

flown by Flying Officer Atcherley won the King's Cup Race at the record speed of 150.3 m.p.h., thus proving its high performance and remarkable dependability under the most difficult conditions.

Armstrong Siddeley engines have won the King's Cup in 1923, 1924, 1925 and 1929, making the fastest time on each occasion.

ARMSTRONG SIDDELEY ENGINES have an equally remarkable reputation for dependability in civil use, their three years record of reliability on Imperial Airways Ltd. Argosies being unsurpassed by any engine in the world.

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PRIVATE



FLYING

A Section of FLIGHT in the Interests of the Private Owner, Owner-Pilot, and Club Member

AN AUSTRALIAN MONOPLANE FOR THE PRIVATE OWNER

The Larkin "Lascoter"

WE have received a brief general description of a new all-metal, semi-cantilever Australian monoplane, designed by the Larkin Aircraft Supply Co., Ltd., of Melbourne. It is produced expressly to meet the needs of private owners, apart from the requirements of aerial mail and passenger services, and is said to be the first all-metal machine designed and built in Australia. The "Lascoter," as it is styled, is reported to have a factor of safety in excess of the strength requirements of the British Air Ministry, and the whole of the detail parts are particularly attuned to Australian conditions. Sections are simple in outline, easy to repair, and all vital parts can be readily inspected. The

landing or tethering, even in strong cross winds. In view of rough landing conditions amongst stunted bush or long grass, which are to be met with in Australia, the increased clearance is essential. To facilitate turning on the ground without manual assistance, independent wheel brakes are operated in conjunction with the rudder. The brakes are of the non-locking type covered against water or mud.

Passenger's Comfort

A very large and roomy saloon will accommodate from four to six passengers, including the pilot. Along each side are large unsplinterable glass windows, whilst the seating



A Landing Ground Campaign has been carried out in South Australia, sponsored by Louis Coen Wireless Pty., Ltd., who are said to be the first company in the Dominion to use aircraft for conveying their commercial travellers on a regular circuit, and own three D.H. "Moths." The Vacuum Oil Co. Pty., Ltd., also contributed to the campaign, which resulted in over 130 towns being inspected and the selection of many sites. Our illustration marks the conclusion of a section of the campaign in South Australia, when over 50 towns in the State were visited. Officials of the South Australia Aero Club congratulate the Victorian airmen on their useful work. (Left to right): Capt. Roberts, pilot of a touring machine: Mr. A. C. Hewitt (Club President), Mr. J. Churchill Smith (Club Secretary), Mr. B. Skeil (Organiser), and Capt. Mollison, late R.A.F. (Club Instructor).

machine is of the high-wing saloon type, designed to furnish comfortable, safe, and rapid flight for five persons, in addition to the pilot, and has a non-stop range of 600 miles.

Non-Welded Construction

A feature of the patented steel tubular fuselage is an entire absence of welded joints. It is built in three distinct parts, front section, cabin, and rear section. Both front and rear sections are quickly detachable to facilitate transport. Immediately behind the engine is a fireproof bulkhead. The petrol is fed by gravity from a central petrol tank having a capacity of 80 galls., thus admitting a non-stop range of 7½ hours at cruising speed with a Siddeley "Puma" engine. A separate tank holds a reserve of 5 galls. A split-axle type of undercarriage provides for an exceptionally wide track which ensures maximum control and stability when

consists of roomy leather lounge chairs with semi-pneumatic upholstery. The cabin interior is adaptable to the individual taste of the owner. So that the passenger's enjoyment shall not be interfered with by noise, the saloon is fitted with a double skin, interspaced with a special sound-resisting packing.

The pilot's seat is as far forward as possible, admitting a practically perfect view in every essential direction. Since ability to fly in bad weather is largely determined by vision, every precaution is taken, and his adjustable, unsplinterable glass screens are fitted with wipers.

There is a spacious luggage compartment and full flying equipment, including hand-starting magneto, compass, R.P.M. indicator, altimeter, oil-pressure gauge, water-temperature gauge, oil-temperature gauge, air-speed indicator, tool kit, fire extinguisher.

LEICESTER AERO CLUB INAUGURATED BY THE AIR MINISTER

HE RT. HON. LORD THOMSON, Secretary of State for Air, was present at the inaugural luncheon of the Leicester Aero Club at Leicester on July 31. In the course of his speech he said that he regarded as one of the principal functions of his office the development of civil aviation.

What he dreamt of was the putting of the aerial transport system of this country on something like the basis of the mercantile marine-something widespread, something entering into the lives of millions, a transport system fostered and fed by an aircraft industry whose products would be the finest in the world, which would open new markets for

the sale of British goods.

We needed to fly as a nation because we could never maintain our position in the world unless we were in the van of every conceivable form of human development. This country was an overcrowded land of 40,000,000 people, with a great Empire built up by readiness to adopt new developments. It could not be left behind in flying, which meant increased efficiency and strength, although not strength of an aggressive type.

He had met hundreds of people who disliked flying because

it was dangerous, because it was inconvenient, because it meant a disturbance of preconceived ideas. No one could They could adopt that sort of attitude at the present day. not neglect this new form of transport. Only a few weeks ago they were horrified by an air disaster in the Channel. Was it realised that there had been nearly 19,000 crossings of the Channel since 1925, and that there had been only three forced landings in the Channel, only one of which had been fatal? If they compared that with the performances of any other form of transport they would find that aviation certainly had the upper hand.

Regarding flying clubs, Lord Thomson continued, their value was not, as some people supposed, the training of war pilots. The value of these clubs was that they educated the public. They wanted these clubs to train the British people in air sense. To join one of these clubs was not to join a military body. Aviation was much more than a thing to be applied to war. He hoped that the local club would provide an outlet for the people of the city and country to travel to any other part of the world by the swiftest and safest means of communication. Flying was safer than

travelling on the road.

SOUTH AFRICA AERO CLUB OF

T the third annual general meeting of the Aero Club of South Africa considerable progress was reported, much of which was attributed to Col. W. D. Beatty, A.F.C., one of the promotors of the Aero Club. One year ago five clubs out of six had started flying operations. Today seven clubs out of nine are flying, the three new clubs being

Witbank, Benoni and Germiston.

The clubs, according to report, have flown a total of over 4,500 flying hours, which represents well over 270,000 miles. A year ago the number of light aeroplanes owned by them was eight. Today it is 14, and over 10,000 passengers have been carried in these machines, while the number of members flying solo has increased from 39 to 91.

Last year the Aero Club recorded important flights, including those of Lady Heath, Lady Bailey, Sir Alan Cobham and Lieut. R. Bentley. During the period under review flights such as Lady Bailey's African survey and those of Capt. Halse, Lieut. Pat Murdoch, Mr. Van Lear Black and party, Sqdr.-Ldr. Slatter, Lieut. Bentley's honeymoon flight to England and back, the French and Portuguese expeditions had helped tremendously to further the interests of the cause of aviation in South Africa.

Further progress is also recorded in the establishment of landing grounds. Nearly every town of importance has its landing ground now, while others are preparing grounds. Town Councils in nearly all cases are leading the way, and many are prepared to lay down hangar accommodation and erect workshops, etc.

Imperial Airways, in conjunction with the Blackburn Cobham Aviation Company, have completed negotiations for an air service to the Union from Egypt. The Union Government has furthermore decided to assist this line with a

subsidy.

The annual output of gold in the Union is approximately 400 tons—the value of which is in the region of forty million pounds sterling. Interest on this for a fortnight is tremendous and is roughly the amount that can be saved by exporting gold by air instead of by sea.

London Aeroplane Club, Stag Lane, Edgware, Sec., H. E. Perrin, 3, Clifford Street, London, W.1.

Bristol and Wessex Aeroplane Club, Filton, Gloucester. Secretary, Major G. S. Cooper, The Aerodrome, Patchway, Glos.

Oinque Ports Flying Club, Lympne, Hythe. Hon. Secretary, R. Dallas Brett, 114, High Street, Hythe, Kent.

Hampshire Aero Club, Hamble, Southampton. Secretary, H. J. Harrington, Hamble, Southampton.

Lancashire Aero Club, Woodford, Lancs. Secretary, Mr. Atherton, Avro Aerodrome, Woodford.

Liverpool and District Aero Club, Hooton, Cheshire. Hon. Secretary, Capt. Ellis, Hooton Aerodrome.

Midland Aero Club, Castle Bromwich, Birmingham. Secretary, Maj. Gilbert Dennison, 22, Villa Road, Handsworth, Birmingham.

Newcasile-on-Tyne Aero Club, Cramlington, Northumberland. Secretary, John Bell, Cramlington Aerodrome, Northumberland.
Norfolk and Norwich Aero Club, Mousehold, Norwich. Secretary, G. McEwen, The Aerodrome, Mousehold, Norwich.
Nottingham Aero Club, Hucknall, Nottingham. Hon. Secretary, Cecil R. Sands, A.C.A., 30, Park Row, Nottingham. Hon. Secretary, Cecil R. Sands, A.C.A., 30, Park Row, Nottingham.
The Scottish Flying Club, 101, St. Vincent Street, Glasgow. Secretary, George Baldwin, Moorpark Aerodrome, Renfrew.
Southern Aero Club, Shoreham, Sussex. Secretary, Miss N. B. Birkett, Shoreham Aerodrome, Sussex.
Suffolk Aeroplane Club, Ipswich. Secretary, Maj. P. L. Holmes, The Aerodrome, Hadleigh, Suffolk.
Yorkshire Aeroplane Club, Sherburn-in-Elmet, Yorks. Secretary, Lieut.-Col. Walker, The Aerodrome, Sherburn-in-Elmet.

LONDON AEROPLANE CLUB

Report for the month of July.—Instructors: Maj. H. C. Travers and Capt. F. R. Matthews. Ground engineers: C. Humphreys and A. E. Mitchell. Aircraft: The following machines were in commission—G-AABL, G-AABN, G-EBXS, G-EBZC, G-AAEX and G-EBWY. Total flying time for the month, 378 hrs. 40 mins. (910 flights). Dual instruction (341), 150 hrs. 25 mins.; cross country instruction (22), 35 hrs. 5 mins.; solo (302), 125 hrs. 30 mins.; passenger flights (140), 50 hrs. 10 mins.; test flights (105), 17 hrs. 30 mins. 30 mins.

The month of July was a record one for the club as regards flying time. During the month 225 individual members made flights on the club air-

During the month 225 menyidual and the Condon Aeroplane Club completed craft.

Twelve Month's Flying.—On July 31 the London Aeroplane Club completed its subsidy year, and the results show a large increase on the previous year. The club was able to earn the full Government subsidy.

Year ending July 31, 1929.—Dual instruction (2,584), 1,116 hrs. 35 mins.; solo (2,405), 1,029 hrs. 5 mins.; passenger flights (586), 221 hrs. 20 mins.; test flights (960), 161 hrs. 5 mins. Total (6,538), 2,528 hrs. 5 mins.

This compared very favourably with the previous year, when the total flying time was 1.413 hrs.

time was 1,418 hrs.
"A" and "B" Licences.—During the year 64 "A" licences and four "B" licences were obtained.

BRISTOL & WESSEX ABROPLANE CLUB, LTD.

REPORT for the month ending July 31.—Instructors: E. B. W. Bartlett and L. A. Egglesfield. Ground engineer: A. W. Webb. Machines in commission (2): TV, XF. Flying time for July, 124 hrs. 15 mins. Pupils instructed and hours flown (30), 77 hrs. 40 mins. Soloists and hours flown (6), 9 hrs. 50 mins. Licensed pilots and hours flown (16), 29 hrs. 30 mins. Passengers carried and hours flown (44) 11 hrs. 20 mins.

The items of chief interest for the month were an addition to the club staff of Mr. L. A. Egglesfield who joined us as additional instructor, and the increase of our machines to five with an additional Moth XF. YH has been out of commission for complete overhaul the whole month, and the extra machine has been invaluable. The cost of the machine is being raised by voluntary subscriptions, the total now promised or received having now passed £250. Mr. Leaver, the Hon. R. Westenra, Mr. W. H. Amory, Lady Some and Mr. F. D. Butcher passed their "A" licence tests. The event of the month was the King's Cup. Judging by the complimentary letters of thanks we have received from competitors, we feel we coped successfully with the occasion. In spite of the race passing here on a Friday the dub profited financially. The aerodrome organisation was in the very capable hands of Mr. C. T. Holmes as last year. We were fortunate in having the very will be and able assistance of the recently arrived R.A.F. details, and in addition the Rev. Gay and his Boy Scouts who worked untiringly. Mr. Bartlett emulated

CANADA

COMMERCIAL 1. "Via Commercial Cables,"

The following CABLEGRAM received, at

CAPTAIN ROY MAXWELL DIRECTOR OF ONTARIO GOVERNMENT AIR SERVICE WHO HAS JUST RETURNED FROM AN EXTENSIVE TOUR OF NORTHERN ONTARIO VISITING REMOTE AND UNTRAVELLED AREAS OF THE DISTRICT OF PATRICIA IN CONNECTION WITH THE COMPLETION OF LAST TREATY WITH INDIAN TRIBES WITH DEFUTY MINISTER OF LANDS AND PORESTS AS PASSENGER SPEAKS WITH UNSTINTED PRAISE OF THE PERFORMANCE OF HIS GIPSY MOTH STOP AIRCRAFT AND ENGINE FUNCTIONED FAULTLESSLY THROUGHOUT THE LONG TOUR AND SCHEDULE WAS MAINTAINED IN SPITE OF ADVERSE WEATHER AND HEAVY LOAD.



WESTERN UNION CABLEGRAM

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THE WESTERN UNION TELEGRAPH COMPANY.

ANGLO AMERICAN TELEGRAPH CO. LO.

1929 JUI 18

WILLAND AIRCRAS

". "Via Commercial Cables,"

528

1 9JUL 1929

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CANADIAN BUILT LIGHT AEROPLANE

TO BE FITTED WITH GIPSY ENGINE CARRIED OUT TEST

COMMERCIAL

The following CARLEGRAM received, at

FLIGHTS YESTERDAY WITH EMINENTLY SATISFACTORY RESULTS STOP THE PERFORMANCE EXCERDED EXPECTATIONS AND THE TEST PILOT WAS IMPRESSED BY THE RESERVE OF POWER AND SMOOTH RUNNING QUALITIES.

MOTH TORONTO.

1929 JUL 18

Now comes testimony from Canada of Moth dependability. It endorses once again the Gipsy's claim to unfailing re-

liability which is evidenced by the Sealed Gipsy Tourto date 500 flying hours with only routine attention. This

engine will be re-installed in a Moth, after the exhibition at Olympia, and the Tour will

continue.

GIPSY MO

THE DE HAVILLAND AIRCRAFT CO., LIMITED

Siag Lane Aerodrome, Edgware, Middlesex
Telegrams: Havilland, 'Phone, London
Telephone: Colindale, 6160-6163

THE ONTARIO GOVERNMENT HAS HAD TWELVE GIPSY MOTHS IN CONSTANT INTENSIVE OPERATION ON FIRE DETECTION DUTY SINCE THE OPENING OF THE PRESENT OPERATING SEASON STOP IN LESS THAN TWO MONTHS THESE ATROPART HAVE PLOWN AN AGGREGATE OF OVER TWO THOUSAND HOURS AND HAVE GIVEN ENTIRELY TROUBLEFREE SERVICE STOP NOT A SINGLE REPLACEMENT MADE ON ANY GIPSY ENGINE STOP OFFICIALS AND ENGINEERS ALIKE EXPRESS COMPLETE SATISFACTION STOP THE CONDITION OF ENGINES IS SO GOOD THAT THE PERIOD BETWEEN TOP OVERHAULS HAS BEEN EXTENDED TO TWO HUNDRED HOURS.

MOTH TORONTO.

"TITANINE"
DOPE
AND THE

KING'S CUP AIR RACE

1st GLOSTER "GREBE"—Flying Officer R. L. R. ATCHERLEY
2nd D. H. MOTH —Lieut. L. G. RICHARDSON, R.N.
3rd D. H. GIPSY MOTH—Capt. W. L. HOPE

A

THE 22 MACHINES THAT FINISHED THE COURSE WERE COATED WITH

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THE WORLD'S PREMIER

Telephones: Gerrard 2312, Regent 4728.

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HENDON (London, N.W.).
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TITANINE-EMAILLITE LIMITED, Empire House, 175, Piccadilly, London, W.1.

his victory at Blackpool last year by winning the Club Aerobatic Competition at Heston. The club official holidays is the latter half of August, but flying will continue during that period except on Mondays under Mr. Egglesfield. We are intending to hold an Aerial at Home on Sunday, September 22. Details are not complete but it will be worth attending. This will wind up our stay at this aerodrome, as we are due to move to the new Bristol Aerodrome on October 1. Plans for the club-house have been finally approved and we look forward to having the best club-house in the country.

HAMPSHIRE AEROPLANE CLUB

Report for the month ended July 31.—Total time for the month: 165 hrs. 25 mins. Dual: 91 hrs. 35 mins. Solo: 25 hrs. 25 mins. "A" Pilots: 38 hrs. 45 mins. Instructors, solo and passengers: 9 hrs. 40 mins.

The Club has purchased a new "Gipsy-Moth" which is ready for collection and will be collected after the holidays. The veteran "OH" is also ready, so we shall commence after the holidays with four machines.

Members are again reminded that the club has chartered the Isle of Wight steamer "Prince of Wales" for the use of members and their friends on september 7, the date of the Schneider Trophy contest. Tickets are now available and those who desire them should get in touch with the Secretary as soon as possible. Tickets, exclusive of refreshments, are £1 1s. each, and all applications must be accompanied by a remittance.

MIDLAND ABRO CLUB

(July 21-27).—The total flying time was 53 hrs. 5 mins. Dual: 30 hrs. 57 mins. Solo: 16 hrs. 15 mins. Passenger: 4 hrs. 55 mins. Test: 58 mins. The following members were given dual instruction by Messrs. W. H. Sutcliffe and T. W. Nash: G. P. Haylock, L. W. Farrer, F. Norman, B. P. A. Vallance, Mrs. Leigh-Fermor, R. Darlington, Mrs. Vereker, Harvey Sangster, J. E. Yardley, L. E. Lee, Mrs. Burnett, P. M. Patel, Maj. D. Thomson, A. F. Hill, J. R. Bond, G. Norton, E. C. Merrick, H. G. Tower, P. B. Hackett, S. J. Eardley-Wilmot, C. T. Davis, H. Beamish, H. Coleman, H. A. Taylor. Advanced Dual: J. B. Briggs, G. E. C. Hill. "A" Pilots: R. D. Bednell, J. Rowley, R. C. Baxter, S. H. Smith, E. P. Lane, R. L. Jackson, H. J. Willis, W. M. Morris, F. J. Steward, S. Duckitt, E. D. Wynn, J. Cobb, C. W. Fellows, W. Swann. Soloists: F. G. Robinson, H. G. Tower, J. R. Bond, G. P. Haylock, H. E. Evans, T. W. Wild, K. S. Neale, F. T. Lydall, Maj. D. Thomson, P. B. Hackett, H. Coleman. Passenger flights were given to 16 members. Maj. D. Thomson, P. B. Hackett, H. Coleman. Passenger flights were given to 16 members.

Messrs. F. G. Robinson, H. G. Tower, J. R. Bond and H. E. Evans successfully carried out the flying tests for their "A" licences.

NOTTINGHAM ABRO CLUB

NOTTINGHAM ABRO CLUB

Revort for July.—Analysis of flying times: "A" pilots, 48 hrs. 30 mins.; soloists, 9 hrs. 55 mins.; instructor, tests, 3 hrs. 10 mins.; passengers, 6 hrs. 50 mins.; dual, 51 hrs. 55 mins. (61 hrs 55 mins.; total, 120 hrs. 20 mins.).

"A" Licence Pilots who flew during the month were Lord Douglas Hamilton, Sub.-Lieut. Cliff, R.N., Messrs. Ball, Bradley, Granger (F.), Kay, Hutchinson, Selvey, Shipside, Taylor, Warren, Winn (Chairman of the Leicester Aero Club), and Wynne of Derby. Messis. Hurst and Gallimore, both old service pilots, completed their time early in the month for their "A" kicences. Mr. Gallimore shortly returns to India where he threatens to stir up a state of airmindedness amongst his friends on rejoining them. Mr. Hirst is a member of the committee of the newly-formed and go-ahead club at Leicester. We fear we shall not be seeing much more of him, as they shortly expect to be very busy.

Soloists who turned up during the month were Messrs. Cudlip, Gallimore, Hurst, Sail, Smith, Granger (J.), and Nicholson. Our orgy of first soloists did not materialise, but those of them who did complete their first solos, namely, Messrs. Sail, Smith, Granger (J.), and Nicholson, all put up remarkably good efforts. Excluding ex-service pilots, our record for minimum dual prior to solo was twice beaten this month. Mr. Smith went off in 5 hrs. 20 mins, thus beating Mr. F. Granger's record which had so long stood at 7 hrs., but Mr. J. Granger, a younger brother of the old record holder, taking up the fight on behalf of the family, reduced this record ten days later to 3 hrs. 20 mins.

The Lord Mayor of Nottingham (Ald. A. R. Atten) honoured our older.

The Lord Mayor of Nottingham (Ald. A. R. Atkey) honoured our club

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Scarborough Air Display

An Air Display was witnessed by a large crowd of holiday-makers on the Scarborough Racecourse on August 5, when, despite rather unsettled weather, the Air Pageant run by the Northern Air Lines, Limited, of Manchester, was suc-cessfully carried through. The Northern Air Lines had eight of their airplanes over for the occasion, and at 2.30 these were augmented by the arrival of about nine private and club machines. Several prizes were offered for the first four visiting 'planes to arrive after 2.30, and much excitement was aroused when Ivor Thompson (Leeds), flying a Blackburn Bluebird, just beat R. G. Cazelet, who had flown from Cambridge in his Westland "Widgeon." Mr. Dawson Leeds) was third, and Miss W. Brown (Manchester) fourth. Miss Brown also secured the prize for the first lady to cross the This little competition proved a very close race, all the

planes crossing the line within one minute of the winner.

Another feature of the pageant was a 25-mile race for visiting aircraft, which was won by Miss W. Brown, in an Avro Avian, Flight-Lieutenant Rose, in a Moth, being second. The stunt flying of Captain A. W. Kingwill, head pilot of the Northern Air Lines, Ltd., was one of the events, and walking the wings, a parachute descent, crazy flying, and many humorous events all added their quota to the display which, from a spectacular point of view, was a great success.

Bedfordshire Aero Club

It may be of interest to our readers to know that an aero club has been formed in Bedford and that at the moment efforts are being made to obtain a suitable site for an aerodrome. Several possible sites have been considered, and it is hoped that co-operative efforts by the club and the twice during the course of the month, by flying to Gosport on the first occasion with Mr. Wynn, to attend a conference at Portsmouth, and returned most of the way by air, despite very adverse weather which finally forced them down when within 20 miles of the city. On the second occasion, in company with our pilot-instructor, he flew to Stag Lane to collect the licence for the city's new air port at Tollerton, which was declared open upon his return the same day. On this last occasion Alderman Atkey flew in his robes of office in order to pay homage to the Under-Secretary of State for Air (Mr. Montagu) and the Director of Civil Aviation (Air Vice-Marshal Sir Setton Branker), who had journied especially to Stag Lane to hand over the licence in person).

Our flying time is good this month, when realising that, of the 24 days on which we flew, both machines were in action for only ten days together. This reflects great credit on the members, whose enthusiasm is unbounded, and one ventures to think what might have been possible had the club been in the fortunate position of having its own club-house and ground.

SUFFOLK & EASTERN COUNTIES AEROPLANE CLUB

(July 28-August 3).—Chief Instructor: G. E. Lowdell, A.F.M. Instructor H. M. T. Clayton. Ground Engineers: T. Mayhew, H. Brown. Aircraft: Bluebirds "BF, SZ, RE, UH. Aerodromes: Hadleigh, Suffolk; Conington, Cambs. Flying time by Suffolk and Cambridge clubs as follows: Suffolk Aero Club.—8 members were given dual instruction: 2 hrs. 55 mins. 6 members flew solo under instruction: 3 hrs. 25 mins. A and B licence pilots flew: 4 hrs. 45 mins. 16 passengers were carried: 1 hr. 35 mins. 7 tests were made: 35 mins. 1 cross-country flight: 2 hrs. Total flying time for week: 15 hrs. 15 mins.

Mr. H. Berry performed a very creditable first solo.

New members continue to join up to both the Suffolk and Cambridge clubs in increasing numbers.

Preparations for our International Air Rally, to be held on August 31 and September 1, are proceeding apace.

Preparations for our International An Idam), to Schember 1, are proceeding apace.

Cambridge Aero Club.—6 members were given dual instruction: 2 hrs. 40 mins. 3 passengers were carried: 15 mins. 5 tests were made: 45 mins. Total flying time for week: 3 hrs. 40 mins.

FROM THE FLYING SCHOOLS Brooklands School of Flying, Brooklands Aeredrome

(July 31-August 6.)—Flying time: Instruction and joy rides: 45 hrs. 15 mins. "A" licence pilots: 15 hrs.

Little of special interest has happened this week. There have been several visitors coming down for trial lessons and it appears that the public are at last beginning to appreciate not only the pleasure side of flying, but also its commercial use. We now have a machine permanently stationed down at Clacton with E. A. Jones doing passenger flights.

The following have joined the school: E. Nelson and R. Ruutz Rees, who has allowed us a few days to get him his licence before returning to the States.

Phillips and Powis School of Flying, Reading Aerodrome

(July 26-Aug. 1).—Flying time: 16 hrs. Instructors: F/O. R. T. Shepherd, Mr. H. B. G. Michelmore.
Capt. and Mrs. Pim have joined the school and are making very satisfactory

progress.

Our new Gipsy-Moth is greatly admired, and has been kept very busy.

Mr. R. G. Nash from Guildford has joined the school.

OVERSEAS CLUBS SINGAPORE FLYING CLUB

(June 23-29).—Total flying time: 4 hrs. 10 mins. Dual instruction 2 hrs. 45 mins. Solo flights: 50 mins. Passenger flights: 25 mins. Tests: 10 mins.

Owing to rain practically every day this week no flying was possible beyond a very little on Sunday morning and Saturday afternoon.



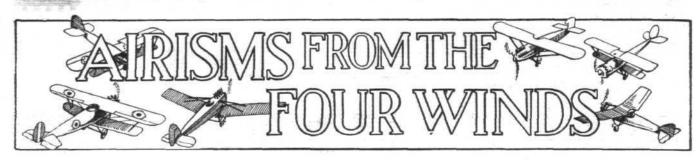
Bedford Corporation with a view to the mutual development of a projected municipal aerodrome will enhance the prospect of successful aviation developments in Bedford and the county. Maj. G. H. Scott is on the Committee, in addition to Maj. S. S. Smith (Chairman); Councillor H. R. Neate (Vice-Chairman); Mr. J. C. E. Robinson; and Mr. L. I. Barford (Hon. Treasurer). The Hon. Secretary is Capt. C.

No. 601 In Training

THE officers and men of No. 601 (County of London) Bombing Squadron, Auxiliary Air Force, arrived at Lympne aerodrome on August 3 for their annual training, and 14 machines flew from the London centre at Hendon to Lympne in just under an hour. The unit flew in formation, and soon in just under an hour. settled down for the serious training of the camp period. Lord Edward Grosvenor, who commands the squadron, was unfortunately unable to be with his unit owing to ill-health, but it is hoped he will be able to come to camp at some time during the training. Flight-Lieutenant H. N. Thornton is in command, and altogether there are 25 officers and 140 other ranks quartered on the aerodrome, the men in one of the large hangars and the officers under canvas. Sixteen officers of the unit now have their wings, and to qualify for these they must have flown at least 80 hours.

New Air Mail to London

A SPECIAL air mail will be carried this month from Galway to London when the ss. Karlsruhe, a Norddeutscher Lloyd liner, calls on August 24. It will be met by Colonel Charles Russell, late Chief of the Free State Air Force, who will take the New York mails in a Vickers biplane to London. The machine will carry about 160 lb. of mail.



Duchess of Bedford's Rapid Flight to India

On August 2 the Duchess of Bedford left Lympne Aerodrome, near Folkestone, to attempt a rapid flight to India and back within a week. Her machine, a Fokker monoplane fitted with a Bristol "Jupiter" engine, was piloted by Capt. C. D. Barnard, who was assisted by Mr. Bob Little. It had a petrol capacity of 400 galls., equal to more than 16 hours' flight. The first stage was a non-stop flight to Sofia, in Bulgaria, which was reached in the evening, and on the following day a short stay was made at Aleppo in the course of flying the next stage to Bushire. On August 5 the monoplane landed at Karachi from Bushire, 3½ days after leaving England. The actual flying time was 40 hours. The Duchess was given a great welcome in India, particularly by the women. During her brief visit—for the return flight began the next day, August 6—she was the guest of the Commissioner of Sind.

Graf Zeppelin's Second Atlantic Flight

For the second time in its brief but active history Graf Zeppelin has flown the Atlantic from east-to west. With 18 passengers on board and a crew of 42 it started from Lake Constance on August 1 at dawn and followed a course leading southwards through France, the Gulf of Lyons, Southern Spain, and the Mediterranean. Gibraltar was passed over at dawn the following day, and by 9 a.m. it reported its position as 300 miles west of Gibraltar and south of Madeira. At 4 p.m. the same day a wireless station in the Azores communicated with the airship with much difficulty, but it calculated that the Zeppelin's position was beyond the islands and it was set for a course to the north of Bermuda. On Saturday morning the Zeppelin sent a wireless message stating its position as 600 miles west of the Azores and all "O.K."; and a later message stated that it was running into head winds blowing from the southwest in which the airship was rocking slightly. On Sunday, August 4, it was sighted over Cape May, New Jersey, at 9 p.m., flying towards the Lakehurst aerodrome, which is 125 miles inland. It landed safely after a detour over New York. The time taken for the whole cruise from Germany was 3 days, 13 hrs. 31 mins. This was better than her previous cruise by more than 16 hours. Dr. Eckener, the commander, stated that good weather had prevailed all the way between Gibraltar to north of Bermuda, and then A continuous battle with head winds and it was very bad. rain over the Gulf Stream reigned for the last 14 hours. But the engines ran perfectly throughout, and the passengers, who included two women, were enthusiastic about their experience. An immediate return flight is expected as a preliminary to the proposed world cruise starting from Germany

British Non-stop Record Plans

The Fairey long-distance monoplane fitted with Napier engine is now being overhauled in preparation for another attempt upon the long distance record. Sqdr.-Ldr. A. G. Jones-Williams and Flt.-Lt. N. H. Jenkins will again be the crew. The new route will probably be towards Cape Town, which will give a greater range than the previous route through India, as the most direct distance between Cranwell and Cape Town—allowing for the curvature of the globe, is about 6,000 miles. Should it not be possible for the monoplane to reach Cape Town an alternative landing place may be Durban, which is nearer to Cranwell by about 600 miles. Both towns already possess aerodromes, the larger one being at Cape Town. On the last attempt the monoplane flew non-stop to Karachi and some distance beyond, covering 4,130 miles. The record is 4,453 miles, which was set up by the Italian airmen Capt. Ferrarin and Major de Prete.

SIR HORACE PLUNKETT, the Irish Statesman and agricultural expert, who is 75 years of age, is learning to fly at the Brooklands School of Flying.

Gipsy-Moth To Go Whaling

A GIPSY-MOTH light aeroplane is being used in a whaling expedition which will leave Norway shortly, and during the week-end the Norwegian pilot, Mr. Lief Lier, who assisted in the search for General Nobile in the Arctic, left Stag Lane aerodrome for Norway in the machine which will be used during the whaling. It was purchased through National Flying Services, and will be housed on the Norwegian whaling ship ss. Kosmos (23,000 tons), which leaves for the Antarctic seas next Saturday, and which will be the mother ship to eight other whalers. The machine, which can also be used as a seaplane, was on view at the recent Aero Show. Aircraft have been used before in searching for seals off the Canadian coasts and for herring off the Scottish coasts, but it is stated that this is the first occasion on which an airman has been called to scout for whales. It is anticipated that the pilot will be able to secure valuable information as to the best way through the ice floes and save the expedition time in working through a given area.

Afghan Aviation Troubles

FOURTEEN Afghan students, whom the ex-King Amanulla sent to Europe to learn aviation, in order that they might become Afghan Air Service pilots, returned to Bombay recently, and found themselves stranded. It is understood that out of Amanulla's former air fleet, Bacha-i-Sakao, the new ruler, has only one machine now airworthy, and that he needs pilots, though whether these youths will undertake service is unknown.

Indian Air Mail Extension

An officer of the Royal Air Force has arrived at Rangoon to complete the arrangements for landing grounds at Rangoon, Moulmein, Tavoy, Victoria Point, and possibly at Mergui and Bassein. He anticipates that the aerodrome at Rangoon will be completed by March next, and possibly earlier, but there is still the need to prepare emergency landing stations at places between Calcutta and Rangoon. These arrangements are apparently being made in connection with the extension of the Indian air mail to Singapore.

Result of Aero Show Flying Competition

Miss A. M. Macdonald, of Egham, Surrey, and Mr. W. L. Selkirk, of Grays, Essex, have been declared winners of the second flying competition which was held at the Olympia Aero Exhibition. The final selection was made at the Air Ministry by Sir Sefton Brancker, Lady Bailey, Group Captain Flack and Sqd.-Ldr. Reid, who acted as judges on behalf of the Aero Show Committee, the donors of the prizes. The winners in both competitions, two women and two men, are being taught to fly by courtesy of National Flying Services, Ltd., at their new London air park at Hanworth. Miss Sale Barker and Mr. H. Henry, winners of the first competition, are now taking their course of flying instruction.

New South African Air Mail

The Postmaster-General announces that the South African Post Office has notified that a new air mail service has been established between Cape Town, Port Elizabeth, Johannesburg and Durban, in connection with the arrival and departure of the mail packets to and from this country. The service commenced with the mail which was due to leave this country on August 9. The new service will accelerate the transmission of correspondence for Port Elizabeth, East London, Durban, Bloemfontein, Johannesburg, Pretoria and surrounding districts, and extend the time in which replies can be sent by the return mail ship. The gain in time is about one day for Port Elizabeth, Bloemfontein, Johannesburg and Pretoria, and one to two days for East London and Durban. The air fee payable on packets sent by the new service is 4d. per oz., in addition to the ordinary postage. Packets intended for conveyance by the new air service may be posted in any of the ordinary ways of posting, up to the usual time of closing for the South African mail. They should bear the usual blue air mail label, of which supplies are obtainable free of charge through any Post Office.

Studentship in Aeronautics

Studentship in Aeronautics

The trustees of the Busk Studentship in Aeronautics, founded at Cambridge University in memory of Edward Teshmaker Busk, who lost his life in 1914 whilst flying an experimental aeroplane, have awarded the studentship for the year 1929-30 to Mr. Stanley George Hooker, of the Royal

College of Science, London.

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A limited number of members are now being admitted to the Hanworth Club at the following rates: Flying members, 5 gns. entrance fee, and 5 gns. annual subscription; Non-Flying members, 3 gns. in each case. For this year, two-thirds of the annual subscription is rebated. Membership of one Club confers Honorary Membership of all other N.F.S. Clubs.

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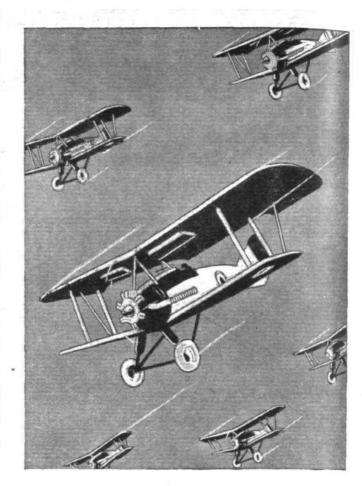
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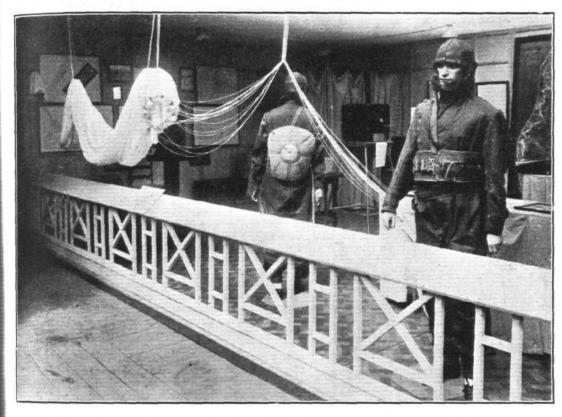
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MISCELLANEOUS AND FOREIGN EXHIBITS AT OLYMPIA

OWING to pressure on our space, we were unable to include in last week's issue a report on the various miscellaneous exhibits of the Foreign representatives. We give below, however, a brief description of the outstanding features found on these stands.

Austria:—A large collection of aerial photographs and maps, to illustrate Austria and its surrounding countries, comprised this exhibit. Wireless and meteorological service

company operates the chief Belgian air lines between London and Brussels, Brussels and Hamburg, and in the Belgian Congo from Boma to Leopoldville and Bandundu, etc. Next year, on July 1, it is proposed to establish an air line from Brussels to Boma, for which purpose the company has received a Government contract. A large number of Fokker ("Jupiters") monoplanes are on order for this service, which will carry mails and freight. In September next the



The Italian "Salvator" parachute exhibited on the stand of British Cadastral and Topographical Air Survey Co., Ltd. This parachute is used in the Italian Air Service

stations for aircraft services were indicated on other maps, whilst enlarged views of Austrian aerodromes gave one an impression of the progressiveness of that country. One large map traced all the cities within reach of Vienna in one day by summer air services operating this year. Associated with this Austrian display was the Austrian Air Traffic Co., which operates many air lines in co-operation with foreign companies.

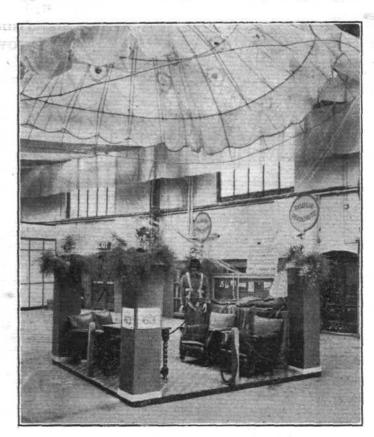
S.A.B.E.N.A., Brussels.—This Belgian air transport

company are to link London and Brussels with a night service for mails and goods. Amongst their large fleet of aircraft used on the Belgian services are approximately 20 Handley Pages, eight being attached to the Congo services and the remainder to the European lines. The company's exhibit was of a photographic and descriptive nature, covering Belgian air centres, air lines, and special flights. The King and Queen of the Belgians are regular air travellers on S.A.B.E.N.A. services, which have a fine record for safety.



SWEDEN AT OLYMPIA: A general view of the Swedish exhibit 859

British Cadastral & Topographical Air Survey Co., Ltd., 36, Basinghall Street, London:—This company had a collection of Italian exhibits on their Stand. First came the Italian "Salvator" parachute. One of the features of this parachute in which it differs from British types is in the harness design. A broad, strong body belt



The "Robur" parachute exhibited by Carl H. Lundholm, A.-B., of Stockholm.

and one shoulder strap make the attachments to the airman's It has, however, both manual and automatic operation, although in place of the usual release ring for manual operation there is a metal hand grip on the body belt. "Salvator" design embodies a pilot chute on the canopy, and has been adopted by the Italian Government. We understand that Japan, Spain, Switzerland, and many other countries have also adopted it. We have recorded in FLIGHT many reports of Italian lives saved by the "Salvator."

Other exhibits were those of the Ottico Meccanica Italiana, which included the "Nistri" air camera with accessories, and the "Nistri" autostabilising periscopic automatic level or bombing sight. Cadastral and topographical surveys, as or bombing sight. Cadastral and topographical surveys, as executed by the "Nistri" methods, were shown pictorially

to complete an interesting exhibit.

French Air Ministry .- As in the case of other foreign Air Ministries, France organised a large collective exhibit occupying considerable space. Compagnie Aerienne Franwhich operates numerous air services, including a 15-minute seaplane service between Dover and Calais, showed their own groups of aerial survey photographs and the maps produced from them. Their aerial activities cover nearly all purposes, for which they possess a large fleet of land and sea aircraft, both open and closed cabin types, carrying various numbers of passengers. Another French exhibit was the well-known Vinay parachute, produced by Louis Vinay, of Paris, which combines manual and automatic release. Its large canopy also functions with a pilot chute, whilst the harness has quick-release devices to safeguard the parachutist from being dragged along the ground. The Vinay parachute is widely used in the French Air services. A special Vinay parachute for dropping mail at night was another exhibit. French air transport companies—namely, the Air Union, C.I.D.N.A., and Cie. Gle. Aeropostale—had attractive pictorial exhibits drawing attention to their wide aerial operations, which range between London and Paris, Marseilles, Geneva, Tunis, Dakar, and across the South, Atlantic to Buenos Aires, etc. The French company Barbier, Renard and Turenne, for whom Mr. G. Davidson acts as sole concessionnaire in the British Empire, compelled the attention of all visitors with their Neon beacon and revolving

beacons. B.B.T. Dioptric landing floodlight wing-tip lights were also displayed. Yacco special stabilised mineral oils for aero engines were shown by Yacco S.A.F., and there were separate French stands as follows :-

Marabini Aviation, Paris :- A very extensive range of accessories for aircraft were shown by this well-known company. There were plywood, steel tension wires, tyres and wheels, tapes, airscrews, altimeters, anemometers, instruments, safety belts, compasses, dopes, inclinometers, air-speed indicators, parachutes, tubes, wireless and aerial cameras, to mention merely a few. Like its English counterpart, S. Smith (M.A.) and Sons, the company can meet almost any order for an aircraft accessory

Le Bourget :- A large model of Le Bourget Aerodrome. Paris, with the air route to London marked with the intervening aerodromes was the prominent feature. It revealed each section of this important air route, and the manner in which air liners are followed, as it were, over the whole course by a train of wireless stations. Other features were French aircraft models and a display of model vehicles to illustrate transport progress throughout history. Aerial maps and a series of pictorial and descriptive monuments to the greatest air

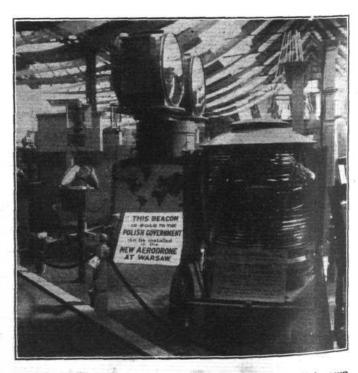
events in French history were also included.

Societe Rateau, 40, Rue du Colisee, Paris:—Turbine and electrically-driven "Rateau" supercharging compressors

for aero engines were exhibited.

Compagnie Aerienne Franco-Canadienne, 266, St. James Street, Montreal, Canada:—This was entirely a photographic exhibit of aerial survey work in Canada, where this company operates commercial aviation in general.

German Aircraft Industry.—This was another collective exhibit, covering German productions. In the Dornier Co.'s section were well-made metal models of modern Dornier aircraft. One was a racing seaplane for which is claimed a maximum speed of 360 m.p.h. It is fitted with two 1,000-h.p. engines, and a feature of its design is the attachment of twin rudders to the ends of the long floats. The Do.X 12-engined 'Siemens Jupiters'') flying-boat was an impressive model beautifully constructed and of special interest in view of the recent launching. Enlarged photographs were shown of this and the trials over Lake Constance. Another model was the Do.S., a commercial type with two pairs of engines in tandem, each of 500 h.p. Junkers Flugzeugwerke A.-G. and Rohrbach Metall-Flugzeugbau G.m.b.H. also had models. Amongst the Junkers were an 18-passenger type (three Jupiters "), smaller passenger types, and freight types with Jupiter " or Junkers engines. A " Rohrbach-Romar "



Some of the aerial beacons displayed by the well-known French firm of Barbier, Renard and Turenne.

super flying-boat model had a removable side to enable inspection of the complete interior equipment and passenger accommodation. Haw-Propellerbau G.m.b.H. drew instant attention to their model. attention to their metal propellers with a working example of a three-bladed all-metal airscrew to show its adjustability

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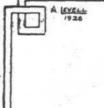
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Just a few of the aero instruments and accessories exhibited by Marabini Aviation, Paris. The compass used by Rene Lefevre, J. Assolant, and A. Lotti for their Atlantic flight is seen on the left.

from the cockpit during flight. The Haw propellers are of variable-pitch with two, three or four blades, some designed for aircraft and others for ventilation. Other German companies exhibited aerial photographs and models of aerodromes.

Phylax Feuerlosch-Automaten-Bau, Gesellschaft m.b.H., Fehrhellinerstrasse 47/48, Berlin N.54, Germany:—This was a foreign exhibit of fire-extinguishers of the Phylax design. There was an automatic dry extinguisher and hand type for all purposes. The "Phylax Aero Type" was classed as automatic, electric or hand-operated, in 1-litre and 2-litre sizes.

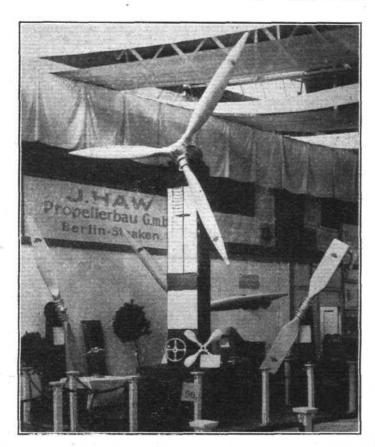
Tensometer Huggenberger, Zurich:—This tensometer is manufactured in three types: A, for laboratory utility; B, for field and works purposes; whilst C is suitable when a greater range of movement is desired. Through the aid of fixing devices the instrument can be quickly mounted in any position. It is stated that no structure or material is too large or too small or too oddly shaped for the tensometer to be set upon, whilst extension bars can alter the gauge length as it is desired.

Italian Air Ministry:—Perhaps the most interesting accessory exhibit here was the large plaster model of the "Benito Mussolini" Medical Institute, with its pneumatic chamber for testing the physique, nerve system and general aptitude of the air pilot. The Institute, by the way, is now being built at Monte Celio, Rome. There were also "Spiga" and "Pirelli" landing wheels on view, whilst a Garelli air compressor for engine starting was a prominent exhibit of technical interest. Italian scale models of aircraft had an historic appeal, for they included the "Santa Maria," a type extensively used by De Pinedo, and the S.64, flown by Capt. Ferrarin and Major Del Prete when they made their duration record. Several propellers, radiators and aerodynamic testing apparatus were also shown.

Sweden: A collective exhibit of Swedish aviation societies and companies were featured to attract attention towards Swedish aviation. The Royal Swedish Institute exhibited a machine constructed for investigating the influence of corrosion on the fatigue strength of metals. One understood that the experts amongst the visitors to the Stand were particularly interested in the new Paulin instruments, such as the altimeters and barometers. Various prominent Swedish steel companies exhibited their aircraft manufactures, amongst which stainless steel was an important product. Models of Swedish aircraft which took part in the search for the *Italia* airship in the Arctic last year were exhibited by Svenska Aero A.B., of Stockholm, with aerial photographs of the desolate Arctic scene where the Italians were marooned. marooned A.B. Aerotransport, of Stockholm, which organises air transport systems in the country and beyond, gave evidence of its fine record of five years' flying without an accident. This is the largest air transport company in Sweden Alexes Sweden. A large map traced the main air routes radiating from Stockholm, the most important route being to London, which is covered in nine hours.

A. B. Flygindustri, Malmo, Sweden: - This Swedish

company had a separate exhibit. It constructs Junkers all-metal aircraft of military and civil designs, under licence from Junkers. Two models of Junker aircraft were exhibited, namely, the Junkers K.47 high performance two-seater low-wing monoplane (Bristol "Jupiter"), and the Junkers K.37 low-wing monoplane (twin "Jupiters") general-purpose machine. K.37 was a working model. The model "Jupiter" engine revolved, and the dummy observer was made to manœuvre the machine gun to show the wide firing range. Guests at the Heston Aerial Garden Party on July 20 had



Various types of metal airscrews were shown by Haw-Propellerbau G.m.b.H. of Berlin.

the pleasure of observing the originals of these models in action. The Junkers K.47 won third place in the International Aerobatic Competition, piloted by Herr Neuenhofer. Both machines are now in production in Sweden. An excellent film of them in flight was one of the attractions of the Stand.

Carl H. Lundholm, A.-B., Stockholm :- The "Robur ',

A RELIEF

parachute, which is an improvement on the "Thornblad," was described in full technical detail and illustrated in FLIGHT, July 11. Its characteristics are a perforated canopy, by which it is claimed that the speed of opening is increased, and combined manual and automatic action. According to recent tests, it will sustain velocities up to 240 m.p.h. with a load of 210 lbs.

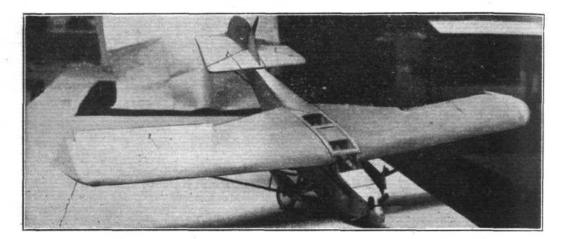
The Inventions Section, which was organised by the Royal Aeronautical Society was not without interest. Some of the inventions exhibited showed a certain amount of promise, while others were not, we thought, altogether sound. One rather interesting exhibit, which demonstrated originality, was a model monoplane by Mr. J. G. Navarro, in which the principal features consisted of (a) a tail plane with diagonal hinged elevators, (b) inverted V-shape rear edge to mainplane, (c) divided rudder brakes. The diagonal

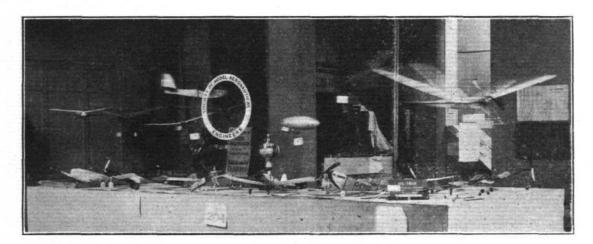
A very ingenious invention—and one we think might have great possibilities—was that of Mr. J. C. Hart, concerning a means for facilitating the landing of aircraft at night. The idea was based on a sound optical principle, employing beams of light from the aircraft, projected on the ground. We hope to go more fully into this invention on a future occasion.

Other inventions consisted of two models showing a new principle in light pumps (Chevalier C. E. Lanzerotti-Spina); the "Areus Control" (L. H. Freeman); a wooden wheel for aircraft (Flt. Lieut. N. Comper); a spring hub for aircraft engines (Maj. B. C. Carter); an expanding annular aerofoil (J. R. Porter); diagrams showing a method of constructing an ornithopter (C. F. Hodson), etc.

The Society of Model Aeronautical Engineers, also known as the S.M.A.E., was also represented at Olympia

Mr. J. G. Navarro's Model in the Inventions Section of the R.Ae.S. at Olympia.





The Society of Mode Aeronautical Engineers at Olympia. Some of the models

elevators had differential action (one up—one down) by means of which, it was claimed, spinning could be checked. In the case of the rudder brake, the rudder consisted of two similar parts with a common hinge, so that they could be opened out—like the leaves of a book—and thus act as a brake. There were several other original points, but lack of space prevents further mention here.

Mr. W. Scotter exhibited a model aeroplane showing the application of the rotor principle, while Capt. F. L. M. Boothby showed two inventions, one a model of an air torpedo, and the other a model of a safety fuel tank.

Two anti-stalling devices, that have both given successful results in practice, were on view—one invented by Mr. J. Barros, of the pneumatic type and very simple, the other invented by Mr. E. D. Wynn, consisting of a syren, which is mounted on the strut of the aeroplane and gives audible warning when the machine is about to stall. It is operated by the air flow and is quite automatic in its action.

> (

An aerodrome for Loanda

REUTER'S Lisbon correspondent reports that the Angola Diamond Company have decided to construct an aerodrome at Loanda (Angola) and to organise an air line for passengers to connect with the South African and Congo services.

A Gateshead Aerodrome Proposed

A conference of local authorities will be held at Gateshead in September to consider the possibility of establishing

by a stand of its own exhibiting a number of interesting models. This go-ahead and successful Society was founded as the London Aero Models Association in 1920, by Mr. A. E. Jones—a name well-known to aero-modellists—since when it made rapid strides, eventually becoming the S.M.A.E., and by agreement with the Royal Aero Club, the paramount body to govern model aeronautics in Great Britain. Its president is Air Vice-Marshal Sir Sefton Brancker.

Model flying and gliding competitions have been held with considerable success all through the Society's existence, and continue to be held with even greater popularity. The chie flying grounds are at Wimbledon Common, Hendon Aero-

drome, and Sudbury Hill.

Some excellent models—including the latest ideas in model aeroplane design—were exhibited, amongst which were a speed model, a "Pterodactyl" and an "Autogyro." All models exhibited, it should be mentioned, were flying models—some being record holders.

•

an air port at White Mare Pool, which is a few miles from Newcastle.

Trinidad Air Ports

Mons Peron, the leader of a mission from the Compagnie Generale Aeropostale, has obtained permission from the Governor to survey Trinidad with a view to establishing an air port for air postal services between Natal in Brazil and the Panama, with branches to Martinique and Guadeloupe.

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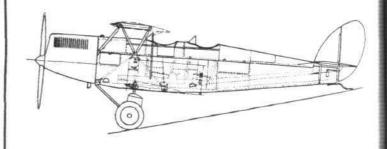
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AIRCRAFT INTERNATIONAL REGISTER

REFERRING to our recent paragraph stating that the Air Ministry had granted authorisation to the British Aviation Insurance Group to carry out inspection of certain classes of civil aircraft for the renewal of Certificates of Airworthiness, we are now informed that similar powers have been given to the British Corporation Register of Shipping and Aircraft, and the provisional regulations are now available. These state that the Aviation Committee is as follows:—

Chairman, Mr. M. E. Denny, C.B.E.; Mr. Robert Clark, Messrs. Clark and Service, Shipowners, Glasgow; Lt.-Col. M. Ormonde Darby, Messrs. The A.D.C. Aircraft, Ltd., London; Mr. M. E. Denny, C.B.E., Messrs. Wm. Denny and Bros., Ltd., Shipbuilders, Dumbarton; Mr. R. G. Heyn, Messrs. G. Heyn and Sons, Ltd., Shipowners Belfast; Mr. Gilbert J. Innes, Messrs. P. Henderson and Co., Shipowners, Glasgow; Com. Harold E. Perrin, Royal Aero Club, London; Lt.-Col. C. E. C. Rabagliati, Underwriting Member of Lloyd's, London; Sir Wm. H. Raeburn, Bart., Messrs. Raeburn and Verel, Shipowners, Glasgow; Col. The Master of Sempill, Royal Aeronautical Society, London; Air Commodore J. G. Weir, C.M.G., C.B.E., Messrs. G. and J. Weir, Ltd., Glasgow; Mr. G. E. Woods-Humphery, Imperial Airways, Ltd., London; and Major R. H. Mayo, O.B.E., F.R.Ae.S., Consultant.

The Executive Committee in London is (Chairman), Mr. M. E. Denny, C.B.E.; (Secretary), Mr. T. R. Thomas, Principal Surveyor, of 49, Leadenhall Street, E.C.3. Telegraphic address—"Beeceear, Fen." Telephone—Monument 4036. The Committee of the British Corporation Register have

The Committee of the British Corporation Register have associated themselves with the American Bureau of Shipping, Bureau Veritas, Germanischer Lloyd, Imperial Japanese Marine Corporation, Det Norske Veritas and Registro Italiano, in the formation of an International Register of Civil Aircraft under the designation A.I.R.

The organisation of the Societies in United States, France, Germany, Japan, Norway, and Italy becomes available for the survey of aircraft classed or intended to be classed by the British Corporation, and the organisation of the British Corporation becomes available for surveys on aircraft classed by any of the other six societies.

by any of the other six societies.

When classification is desired for any civil aircraft which holds, or is intended to obtain, the Certificate of Airworthiness of its country of registration, application should be made to the appropriate society.

Conditions of Classification

- 1. All aircraft intended for classification must conform to the conditions necessary for the issue of a certificate of airworthiness in the country of registry.
- 2. Aircraft accepted for classification after survey by the surveyors to the society will receive certificates of class, and will be entered in the Aircraft International Register with the

symbols :— $\frac{B.C.}{A.I.R.}$

- 3. All aircraft will be distinguished in the Register and on their certificates of class by category and sub-division symbols. See paras. 8 and 9. 4. The continuance of the classification of any aircraft is conditional upon the rule requirements for special periodical, damage and other surveys on the hull and machinery, being duly carried out.
- 5. The committee reserve to themselves the right to reconsider, withhold, or suspend the class of any aircraft for non-compliance with the rules, for defects reported by the surveyors which have not been rectified in accordance with their recommendation, or for non-payment of fees which are due on account of classification and other surveys.
- 6. The society's certificates automatically lapse when there is any damage to or defect in the aircraft which affects their validity and they remain invalid until such damage or defect is made good to the satisfaction of the committee. 7. In no circumstances shall the committee or the society be responsible for inaccuracy, error of judgment, fault or negligence on their own part or on the part of their officers, servants, or agents.
- 8. Aircrast Categories,—Classed aircrast are divided into three categories, namely:—N.—Normal. S.—Special, A.—Acrobatic. Aircrast included in the first and second categories are not permitted to carry out manœuvres which involve abrupt changes of altitude or trim. Aircrast in the second category may be limited to certain flying areas, periods, or weather conditions. Aircrast included in the third category are permitted to carry out any manœuvres.

9. Category Subdivisions.—Category N is subdivided into—T.P-P.—Public Passenger Carriers. T.P-p.—Public Mail Carriers. T.P-M.—Public Freight Carriers. T.m.—Private Aircraft. T.a.—Aerial Work Aircraft.

Category S is subdivided into—C.R.—Racing and Record-making Aircraft. E.S.—Experimental and Test Aircraft. E.n.—School and Practice Aircraft. Category A covers the foregoing eight subdivisions.

Public carriers are those aircraft which are used by their owners or their employees for the transport of passengers, mails, or freight on any route, in consideration of remuneration of any kind. If the aircraft carries passengers and mails, or passengers and freight, it is regarded as a passenger carrier, and if mails and freight, as a mail carrier.

Private aircraft are those used by their owners or their employees, exclusively for themselves or their guests, and are not employed in the carriage of passengers, mails, or freight in return for any kind of remuneration, nor for industrial purposes.

Aerial work aircraft are those which are used by their owners or their employees for industrial purposes, but not for the carriage of passengers, mails, or freight. Racing and record-making aircraft are those used for sport or technical information. Experimental and test aircraft are those specially designed for testing new devices under flying conditions and checking their performance. School and practice aircraft are those used for the training of pilots and for practice flights by certificated pilots.

Surveys on Aircraft

1. Intimation is to be made to the Secretary or the nearest office of the Society when a classed aircraft receives damage affecting airworthiness or when it is found necessary to dismantle the aircraft or any important component thereof, so that all necessary repairs may be carried out to the satisfaction of the Society.

2. The Surveyors are to have access to classed aircraft at all reasonable times, and intimation of all intended overhauls should be made by owners or their representatives, in order that such aircraft may be duly inspected and a date of "Last Survey" recorded in the Register Book. 3. When the hull or machinery sustains damage which affects the airworthiness of the aircraft, the Classification Certificate automatically becomes invalid until such damage is satisfactorily repaired.

4. The Surveyors must undertake surveys at the request of the owners or pilots of classed aircraft, and shall at once report thereon to the Committee; they are to avail themselves of every practicable opportunity of carrying out Classification Surveys in connection with Damage or Repair Surveys, so as to avoid unnecessary duplication of work.

5. Classed aircraft are to be subjected to an annual survey and to intermediate surveys at intervals not exceeding three months. 6. Arrangements should be made for the attendance of the Society's Surveyor when an engine is being subjected to a complete overhaul, at the conclusion of which a test shall be made at full throttle either on the bench or on the aircraft.

Quarterly Surveys.—The intermediate or quarterly surveys on aircraft shall consist of a general examination of the character described in the following paragraphs. The surveyor may require components to be dismantled where there is evidence of defect. The rigging shall be checked and corrected if found necessary by the surveyor.

Planes.—1. Main Planes.—The condition of the covering is to be carefully examined and defects made good. The surveyor shall make an external examination of the structure, but may require parts to be opened up, if satisfied that further examination is necessary.

2. Tail Units shall be examined in the same way as the main planes. The attachments of the tail planes and fins to the hull shall be examined and made good where necessary.

3. Struts are to be carefully examined for deformation or other defects; defective struts are to be replaced or made good. Special attention shall be paid to struts where the paint or varnish has flaked off. 4. External Bracing is to be examined, placed in good condition, and properly tensioned, All wires are to be clean, free from rust, and properly painted or oiled. All turnbuckles, anchorage pins, and lugs are to be cleaned and oiled where necessary, and all locking devices properly secured.

Hull.—1. Main Structure.—An examination is to be made of the cross members and main structure of the hull and its

covering: portions of the covering are to be removed, if necessary, for further examination of joints or structural parts, and defects are to be made good. Crossed bracing wires should be of equal tension and all fairing formers, strips, and fabric securely attached. Attachments of tail planes and fins, all metal fittings, and the anchorage of bracing wires are to be examined and defects made good.

The hull structure and watertight bulkheads of flying boats are to be examined for soundness and watertightness; the bottom rubbing pieces are to be renewed if unduly worn, and the condition of the protective covering is to be examined and made good. If there is evidence of absorption of water, the aircraft is to be weighed when empty, and the amount

of absorption ascertained. The towing and hoisting gear should be in good condition, and the limbers clean; all pipes and pumps are to be examined.

2. Engine Mountings.—The mounting and bearers are to be carefully examined, particular attention being given to the possible effects of vibration upon the structure. The condition and attachment of the engine cowling is to be examined and all defects made good. 3. Cabin.—The emergency exits are to be examined and tested if necessary. The fastenings of the seats and cushions are to be examined.

Undercarriage.—1. Struts, Axles, Wheels and Bracing.— These are to be examined and any defects made good. Seaplane floats are to be examined for soundness and watertightness, as required for hulls of flying-boats.

- Tail Skid.—The joints of the tail skid and the metal rubbing piece are to be examined and any defects made good.
- 3. Shock Absorbers.—The shock absorbers should be so adjusted as to keep the wheels in their proper position under full static load, and must be in good condition.
- 4. The gear for raising and lowering the landing wheels is to be examined and tested, if necessary.

Controls.—1. Cockpit.—Controls are to be examined and adjusted so that there is no undue backlash. Seats and cushion fastenings are to be examined.

Control surfaces are to be examined for condition and satisfactory working. Hinges and pins are to be examined and made good where necessary.

Australian Aerial Services, Ltd.

On May 30, exactly five years since its inception, the Australian Aerial Services report having completed 800,000 flight miles without a single accident, and safely and satisfactorily accounting for 12,000 passengers. One result of the growing popularity of aerial travel was the opening in March of new airports at Coolamon and Junee, and passengers to and from these towns are now being served. Booking on all routes is now so keen that at least a fortnight's notice is necessary to ensure seating. The total mileage flown in May was just short of 16,000, at an average speed, including stops, of 66 miles an hour; with a percentage of 94.4 of arrivals within 60 minutes of schedule time. The schedule of flights completed since November 11, 1924, stands at 100 per cent. Among May passengers was a

3. Control Wires and Rods are to be examined; special attention is to be paid to splices and attachments, guides, pulleys, bell cranks, chain sprockets, link pins, and any other part liable to wear. Appreciable wear at the guides and any defect in lubrication at rubbing points are to be made good. Flexible control cables should be examined for breakage, fraying, or other deterioration: chains should be sufficiently tight to prevent them riding off the sprockets and should have efficient guides, the link pins should not be slack.

have efficient guides, the link pins should not be slack.

Propelling Plant.—The engine log books are to be submitted for examination. 1. The engines are to be inspected and are to be subject to such further examination and overhaul as may be considered necessary as a result of the inspec-

tion.

2. All components of the engine installation are to be examined, particular attention being paid to rubber joints and ignition wiring. All tanks and piping in connection with the fuel, oil, and water systems to be examined, cleaned, and repaired where necessary. Each engine is to be run at the maximum permissible throttle opening, in order to ascertain whether it is in proper working order. Each ignition unit is to be tested separately. 3. Airscrews, bosses, and hub attachments are to be examined and the identification marks checked. 4. All electric equipment is to be tested and made good where necessary.

Annual Surveys

At annual surveys and at those made in conjunction with the surveys for renewal of the Certificate of Airworthiness, the following additions to the requirements of the quarterly inspections are to be made:—1. All necessary dismantling and uncovering shall be done, the engines removed, and a proper examination of all parts of the aircraft. 2. After all necessary repairs and renewals have been carried out, the aircraft shall be placed in the rigging position and incidence, stagger, dihedral, and alignment shall be checked. 3. Airscrews are to be checked for truth, balance, and condition. 4. If the engines require to be overhauled on the occasion of the renewal of the Certificate of Airworthiness, arrangements should be made for the attendance of the surveyor in order to witness a test. 5. Upon the completion of the annual survey the weight of the aircraft should be checked if necessary.

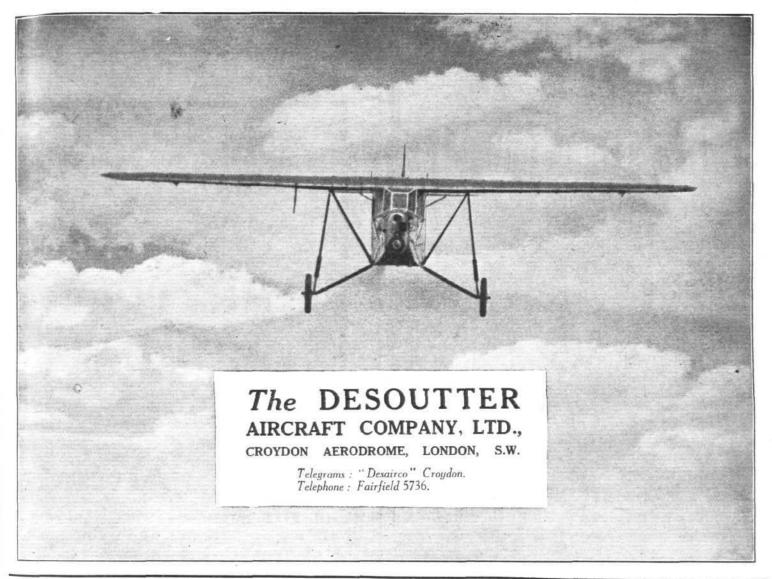
Donald business man who made a first venture in the air by flying over Melbourne in the "Lyre Bird." The novelty and enjoyment of the experience so seized him that he at once re-chartered the 'plane and repeated the trip, this time with the company of his mother, aged 82 years. During the month, also, a Hay doctor chartered an ambulance taxiplane for a flight of 296 miles from Melbourne to Culpataro; and Mr. J. Baillieu, with two friends, flew from Melbourne to his Echuca station for a day's shooting, returning the same night.

The Invaluable Air Way

FLIGHT-LIEUTENANT HIGGINS, of the Canadian Air Force, made a flight of 1,200 miles between dawn and dusk to succour an Indian boy, Samuel Cook, who was lying badly injured on the shore of James Bay.



A trio of Metal "Moths" (Cirrus) for National Flying Services. They are finished in the N.F.S. colours orange and black. ("FLICHT" Photo.)





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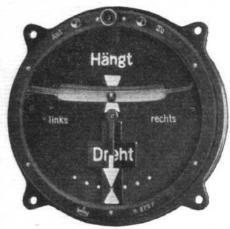
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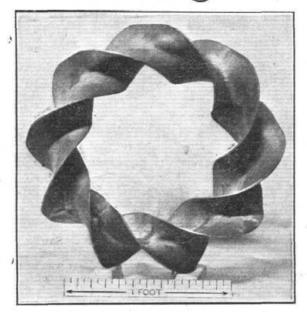
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SAUNDERS-ROE

Air Press Agency

London Gazette, July 30, 1929.

General Duties Branch
Pilot Officer on probation R. C. Warner is confirmed in rank (Feb. 8).
The follg. Pilot Officers are promoted to rank of Flying Officer:—G. Fox Overbury (June 9), J. A. S. Outhwaite (June 13, with seniority of June 9), W. R. Hartwright (June 30).
Sqdn.-Ldr. S. N. Cole is placed on retired list on account of ill-health (July 26). Pilot Officer on probation T. G. Mellor resigns his short service common (July 7).

Medical Branch Flight-Lieut, E. J. Mockler, M.B., resigns his permanent commn. (July 31).

Memorandum
319105 Flight Cadet C. Wilson is granted an honorary commu. as Sec. Lieut., with effect from date of his demobilisation.

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

The folls, are granted communs, in Class A.A. (ii) as Pilot Officers on proba-

tion:—F. W. Moncreiff (July 12); D. J. L. Bryden (July 16); J. Leigh (July 17); C. H. N. L'Estrange (July 17); R. M. Henning (July 18). W. M. E. Crump is granted a commn. in Class A.A. (ii) as a Pilot Officer (July 17). V. O. G. Bell is granted commn. in Special Reserve as a Pilot Officer on probation (July 1).

The folig. Pilot Officers on probation are confirmed in rank:—G. H. Newberry (July 2); F. C. Fisher, F. G. Hill (July 16); G. D. Emms, E. J. B. Langhorne, S. M. Thompson, T. D. Trouncer (July 23); G. G. W. Farquharsom (July 24). Flying Officer E. F. Rhodes is transferred from Class A.A. (ii) to Class C (July 26).

Medical Branck

Medical Branch
E. J. Mockler, M.B., is granted a commn. as a Flight Lt., Class D.i., on resigning his permanent commn. in the R.A.F. (July 31).

AUXILIARY AIR FORCE

General Duties Branch
No. 605 (County of Warwick) (Bomber) Squadron.—The follg, to be Pilot Officer: J. F. Gummow (June 13).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Wing Commanders: R. J. Mounsey, O.B.E., to Home Aircraft Depot, Henlow, for Engineer duties; 17.7.29. J. C. P. Wood, to No. 10 Group H.Q., Lee-on-Solent, for Air Staff duties; 17.7.29.

Squadron Leaders: L. H. Slatter, O.B.E., D.S.C., D.F.C., to No. 19 (Fighter) Sqdn., Duxford; 27.7.29. H. V. Drew, O.B.E., A.F.C., to H.Q., Air Defence of Great Britain, Uxbridge; 17.6.29. B. E. Harrison, A.F.C., to No. 35 Sqdn., Bircham Newton; 10.7.29. G. H. Boyce, A.F.C., to Air Ministry (C.A.S.); 10.7.29.

Flight-Lieuts: H. R. McL. Reid, D.F.C., to Experimental Section, R.A.E., S. Farnborough; 17.7.29. S. D. Macdonald, D.F.C., to No. 605 Sqdn., Castle Bromwich; 1.8.29. J. H. Butler and R. J. H. Holland, both to R.A.F. Depot, Uxbridge; 5.7.29.

Flying Officers: J. S. Dewar, to Schl. of Naval Co-operation, Lee-on-Solent; 18.7.29. C. F. C. Coaker, to Home Aircraft Depot, Henlow; 15.7.29. C. A. C. Patton, to No. 216 Sqdn., Middle East; 2.7.29. W. G. Cheshire, to Station H.Q., Heliopolis; 3.7.29. W. K. Beisiegel, to No. 408

**Flight, Donibristle; 24.7.29.

Pilot Officers: R. L. Bennet, to No. 26 (A.C.) Sqdn., Catterick; 18.7.29. E. C. W. S. Smith, to No. 33 (Bomber) Sqdn., Netheravon, on appointment to a permanent commun. (on probation); 15.7.29. J. Cox, to No. 8 Sqdn., Aden; 12.6.29.

Stores Branch
Flight-Lieut.: F. W. Taylor, to R.A.F. Base, Gosport; 19.8.29.
Flying Officers: C. H. W. Boldero, to No. 603 (City of Edinburgh)

America's Schneider Machine

THE American seaplane Mercury Hispeed, in which Lieut. Alford Williams hopes to compete the Schneider Trophy for the United States, is on its way to Annapolis, Maryland, in preparation for its speed tests. The engineers believe it will reach 400 miles an hour.

Doubtful French Schneider Competitors

The Echo de Paris states as almost certain that France will not take part in the Schneider Trophy contest as the necessary preparations on their seaplanes cannot be completed in time. It will probably be thought a wiser policy to wait for a later Schneider event.

Schneider Trophy Contest Fund

In response to a recent appeal made by the Royal Aero Club, the following donations have so far been received:— Sir Charles C. Wakeneld, Bart., £5,000; Hon. A. E. Guinness, \$\frac{1250}{4250}\$; Southern Railway Co., \$\frac{1}{105}\$; Mr. H. Gordon Selfridge, \$\frac{52}{10s}\$; Cellon (Richmond), Ltd., \$\frac{1}{50}\$; Mr. A. K. Macomber, \$\frac{1}{50}\$; Col. B. S. Millard, \$\frac{1}{50}\$; Hon. Henry Mond, \$\frac{1}{20}\$; Mr. F. G. T. Dawson, \$\frac{1}{20}\$; Lairdways, \$\frac{1}{15}\$; Mr. E. Owers, \$\frac{1}{10}\$ 10s.; Mr. C. Oswald Liddell, \$\frac{1}{10}\$; Lieut.-Col. Sir John Humphery \$\frac{1}{5}\$ 5s.; Mr. L. Morgan, \$\frac{1}{5}\$ 5s.; Mr. William Humphery, £5 5s.; Mr. J. J. Morgan, £5 5s.; Mr. William Leuchars, £5 5s.; Mr. Stanley Spooner, £5 5s.; Sqdn.-Ldr. A. Kubita, £5 5s.; Sir Charles Allom, £5 5s.; Sir John C. E. Shelley Rolls, Bart., £3; Mr. John E. Humphery, £2 2s.; Mr. H. J. Preston, £2 2s.; Mr. C. W. Berry, £2 2s.; Mr. C. Gray Hill, £1 1s.; Mr. F. Bellamy, £1 1s.; Mr. A. J. Ellis, £1 1s.; Miss W. L. Lockyer, £1 1s.; Mr. E. Newgass, 10s. Subscriptions should be sent to the Royal Aero Club, 3, Clifford Street, London, W.1. 3, Clifford Street, London, W.1.

New Aircraft Carrier

THE new aircraft carrier Glorious, which is approaching completion at Devonport Dockyard, has been ordered to commission with a full Devonport crew for service in the Mediterranean. She is to relieve the Courageous, which is to return to England and be attached to the Atlantic Fleet. The Glorious was laid down in May, 1915, as one of a trio of "large light and property of the state o of "large light cruisers," and was commissioned in October,

(Bomber) Sqdn.; 7.8.29. A. E. Haes, to No. 4 Stores Depot, Ruislip 7.8.29. J. T. Riggs, to No. 25 (Fighter) Sqdn., Hawkinge; 7.8.29. Pilot Officers: M. H. Robinson, to Station H.Q., Northolt; 7.8.29. A. J. Howell, to Station H.Q., Kenley; 7.8.29. W. J. B. Elliott, to Station H.Q., Worthy Down; 7.8.29. J. E. V. Tyzack, to Station H.Q., Upavon; 7.8.29. R. G. Seymour, to No. 2 (A.C.) Sqdn., Manston: 7.8.29. G. Blinman, to No. 4 Stores Depot, Ruislip; 7.8.29. H. H. Hilliar, to No. 1 Flying Training Schl., Netheravon; 7.8.29. R. C. Storrar, to No. 1 Schl. of Tech. Training (Apprentices); Halton; 7.8.29.

Medical Branch
Squadron Leader: R. H. Bebb, O.B.E. (Dental), to R.A.F. Depot, Uxbridge, on appointment to a temporary commu.; 1.8.29.
Flight-Lieuts.: G. H. H. Maxwell, M.B., to H.Q., Coastal Area; 8.8.29.
P. D. Barling, M.B., to R.A.F. Depot, Uxbridge; 18.7.29. R. A. W. Kerr, M.B., to R.A.F. Depot, Uxbridge; 12.7.29.

Chaplain's Branch
The Rev. J. R. Appleyard, to Station H.Q., Upavon; 1.8.29. The Rev. J. H. P. Still, B.A., to Schl. of Tech. Training (Men), Manston; 6.8.29. The Rev. R. H. Horton, to H.Q., R.A.F., Cranwell; 8.8.29.

NAVAL APPOINTMENTS

The following appointments were made by the Admiralty on July 31:-Lieuts., R.N. $(F/O\ R.A.F.)$.—F. M. R. Stephenson, to Furious; and H. Ditton, to Greenwich (undated).

1916, for the Grand Fleet. She then had a main armament of four 15-in. guns. The other two ships have been converted into aircraft carriers, the Furious during the war and the Courageous since. The completion of the Glorious will bring up the total of British aircraft carriers to six, in addition to which there is the small seaplane carrier Albatross in the Australian Navy. Including the latter, the total tonnage of the carriers will be 120,350, which is well within the limit of 135,000 tons prescribed by the Washington Treaty. Of the five completed carriers in the Royal Navy, two are stationed in the Atlantic Fleet, two in the Mediterranean, and one in China.

Rolls-Royce Aero Engines

No less than nine of the new types of Rolls-Royce aero engines were fitted in aircraft at the International Aero Exhibition. There were two H type of 830 h.p., each fitted in the Short "Singapore I" F types, each of 490 h.p., or the Fairey "Firefly II," "Firefly III" and "Fox," and F types in the Hawker "Hart" and "Hornet," and Avro "Antelope."

Saunders-Roe, Ltd.

Our readers will be interested to hear that S. E. Saunders, Ltd., of East Cowes, Isle of Wight, the flying-boat designers and constructors, whose "Cutty Sark" flying-boat was much admired at Olympia, are now known as Saunders-Roe, Ltd. Sir Alliott Verdon Roe, K.B.E., became associated with Mr. Saunders' company a short time ago.

Mr. J. F. Inshaw Forms a Company

After 40 years' association with Messrs. Auster, Ltd. Mr. J. F. Inshaw, the managing director, has resigned. With his son, Mr. J. W. Inshaw, who has also been with Messrs. Auster, Ltd., for the past 18 years, he has formed "Inshaw Accessories, Ltd.," to carry on the manufacture of motor, aero and marine windshields, hoods, sunshine roofs, radiator muffs, general body fittings and accessories, also repairs to all makes of windshields and hood fittings. Production commenced on August 7 at "Avion" Works, 68, Farm Lane, Walham Green, Fulham, S.W.6.

CORRESPONDENCE

[The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.]

TORSION IN A MONO-SPAR WING

[2199] I have read with pleasure, Mr. F. Duncanson's clear presentation of the strength of a mono-spar wing in torsion.

I note that the stress in the torque member is limited to 3.9 tons per sq. in., on account of angular distortion. Could not a higher stress be used, with a consequent reduction in weight if each former, from the fuselage out, were given a slight increase in angle of incidence? A total increase of, say, 1°, from the root to the tip of the wing, would give a reasonable stress a top speed, and the correct angle of attack at cruising speed.—Yours faithfully,

J. F. Cuss

Cricklewood, N.W.2. July 9, 1929.

GOING AHEAD IN NEW ZEALAND

I have been an enthusiastic reader of FLIGHT for the past twelve months and, naturally, articles on aviation in New Zealand are carefully read. Referring to your page "Going Ahead in New Zealand," in April 4, 1929, issue, I would like, with your permission, to make a correction. The statement that the attempted flight across the Tasman Sea, previous to the successful flight of Sqdn.-Ldr. Kingsford Smith and crew, was made by two Australian airmen is incorrect. The attempt was made by two New Zealanders, Lieut. Moncrieff and Capt. Hood, during January, 1928; as yet no trace of men or machine has been found. A Ryan monoplane similar to Lindbergh's was used, Wright J.C.5 power unit.

FLIGHT is greatly appreciated here in New Zealand, and I

wish you continued prosperity.

KERR O. MAXWELL

Wellington, New Zealand. June 4, 1929.

IN PARLIAMENT

Aeroplanes for Catapults
Commander Bellairs, on July 26, asked the First Lord of the Admiralty how many catapults for launching aeroplanes, so far as is known, are fitted to American and Japanese battleships and cruisers, respectively; and whether the aeroplanes of any of the navies are fitted with devices so that they can float should they fall into the water?

Mr. Ammon: With regard to the first part of the question, no catapults are fitted in any Japanese battleships and one cruiser only has been fitted with a catapult, which is understood to be for experimental purposes. The position in the United States Navy is that 12 battleships are fitted with two catapults each and six have one each and will be fitted with two, and 10 cruisers have two catapults each and eight cruisers building are being fitted with two each. The answer to the second part of the question is in the affirmative, all planes being float planes or amphibians. the affirmative, all planes being float planes or amphibians.

the affirmative, all planes being float planes or amphibians.

R.A.F. Display, Hendon

Mr. Day asked the Under-Secretary for Air the number of machines that took part in the recent air pageant at Hendon and the number of all ranks, including pilots, mechanics, and groundsmen, who were employed in this pageant; whether he has any statistics that will show the number of gallons of spirit and oil used either in the rehearsal preparations or the actual display, including the amount of oil and spirit used by the aeroplanes from their own stations to Hendon and back; and the number of machines that were damaged or put out of action during the practice for this pageant and the number of men, if any, who were injured during the rehearsals?

Mr. Montague: The Royal Air Force display is the culmination of the year's training, and it is impossible to isolate practice for the display from other flying. The total number of personnel employed in the display at Hendon was 340 officers and 1,679 airmen, and the number of aircraft was 171. The consumption of petrol and oil at the display, including journeys to and from Hendon, was 9,800 gallons of petrol and 653 gallons of oil.

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Parliament Hill Model Aeroplane Club

A VERY successful flying display was given by members of the above club on July 28 at Parliament Hill Fields. About 20 members were present, most of whom flew models, and the performance of the machines was of a high standard. Messrs. Burchell, Davis and Mansfield were making splendid steady flights with their large span monoplanes, the perfect landings of these machines caused great admiration. Mr. Pavely was busy tuning up a tractor spar for an attempt on the duration record, unfortunately a tricky wind and neighbouring trees hampered the model; however, it succeeded in remaining aloft for 67% sees. Mr. Jones' model "Pixie" made some spectacular flights, this little machine looks very realistic when in flight and caused great excitement by hovering over the trees and finally alighting in one of them. Consistent good flying by the models of Messrs. Willis, Knights and Gibson was fully appreciated by a large number of interested spectators, among whom were several old model aeroplane builders, including Messrs. Rippon, Carter, Rasmussen and Dessonter. The keenness displayed by the members and the interest aroused augurs well for the future of the club. Flying displays and competitions are held every Sunday morning on Parliament Hill Fields (weather permitting), commencing at 11 a.m. Those interested in model aeroplanes are welcome at these meetings. Particulars of membership, etc., may be obtained from the Secretary, 48, Narcissus Road, Hampstead, N.W.6.

PUBLICATIONS RECEIVED

The New Company Law. By Herbert W. Jordan. Jordan and Sons, Ltd., Chancery Lane, W.C.2. Price 4s. post free Famous Aviators. Shell-Mex, Ltd., Shell Corner, Kingsway, London, W.C.2.

Official Exhibition of the French Air Ministry in London.
Head Engineer Pitois, Princes Hotel, London.
Science Museum: Board of Education. Handbook of the
Collections illustrating Aeronautics. I. Heavier-than-Air Collections illustrating Aeronautics. I. Heavier-than-Air Craft. Compiled by M. J. B. Davy. H.M. Stationery Office, Kingsway, London, W.C.2. Price 1s. 6d. net.

Aeronautical Research Committee Reports and Memoranda: No. 1185 (M. 58). The Strength of Tubular Struts. Prof. A. Robertson. July, 1927. Price 2s. 6d. net. No. 1 July, 1927. Price 2s. 6d. net. No. 1231 (Ae. 382).—The Skin Friction on a Circular Cylinder. By A. Fage. February, 1929. Price 9d. net. H.M. Stationery Office, Kingsway, London, W.C.2.

The Public Debts of Australia. By J. R. Collins, C.M.G. The High Commissioner for Australia, Australia House, Strand London, W.C.2.

Strand, London, W.C.2.

Droit Aérien. April
4, rue Tronchet, Paris. April, May, June, 1929. Per Orbem,

Suggestions for Aircraft Designers. The Skefko Ball Bearing

Co., Ltd., Luton, Beds.

The Gloster. Vol. 4. No. 2. July-August, 1929. Gloster Aircraft Co., Ltd., Sunningend Works, Cheltenham, Glos.

Your Aeroplane: Its Care and Maintenance. By Fourteen Cheltenham, Shell-Mex. Ltd., Shell Corner, Kingsway, Kingsway, London, W.C.2.

Some Famous Air Achievements. D. Napier and Son, Ltd.

Acton, London, W.3.

Acton, London, W.3.

Heat Treatment Bulletin No. 42. June, 1929. The Heat Treatment of High Tensile Aluminium Alloys. By A. R. Parfield Flectric Furnaces, Ltd., Electric Page. Wild-Barfield Electric Furnaces, Works, North Road, Holloway, London, N.7.

The Engineer's Year-Book for 1929. Compiled and Edited by H. R. Kempe and W. Hanneford Smith. Crosby, Lock-wood and Son, 7, Stationers' Hall Court, London, E.C.4.

Price 30s. net.

Department of Overseas Trade. Financial, Industrial and Commercial Conditions in Canada to April, 1929. Report by F. W. Field. H.M. Stationery Office, Kingsway, London, W.C.2. Price 3s. net.

Vickers (Aviation), Ltd., Vickers Vickers and Aviation.

House, Broadway, Westminster, London, S.W.1.

The Motor Cyclist Reference Year Book, 1929-30. Edited by F. J. Camm. T. G. Simpson and Co., Ltd., Coombelands, Addlestone, Surrey. Price 1s.

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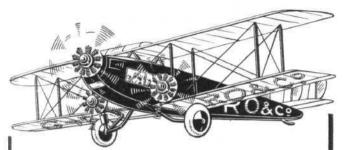
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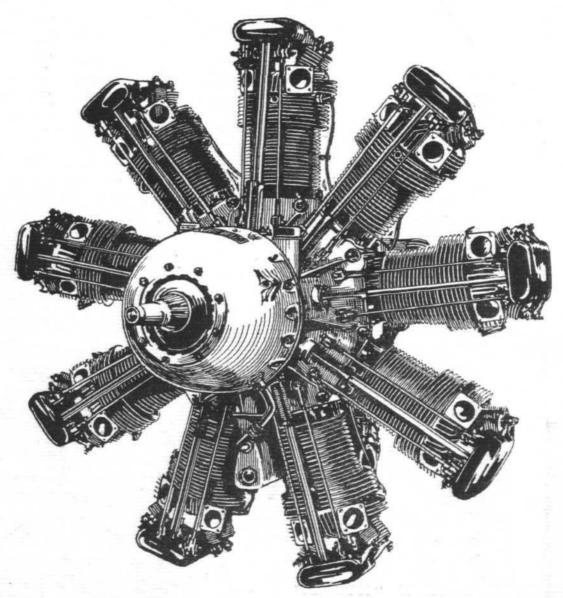
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